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The Accounting Review

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The material in *M. J. Wasserman's* article was obtained in France under a fellowship granted by the Social Science Research Council. It is a part of a larger study which is now in process, "The Economic and Social Effects of Inflation in France." Mr. Wasserman is a graduate of Cornell University and of the University of Illinois, and is Docteur ès Sciences Economiques (Université de Lyon). At present he is assistant professor of economics in the University of Illinois.

Hazen W. Kendrick is the recipient of degrees from the Universities of Colorado and Illinois, and has been instructor in accounting at both universities. He returned to the former institution in 1929 as assistant professor in accounting.

William S. Schlauch is an instructor in accounting at New York University and has been a teacher of mathematics for many years.

H. L. Kunze is in charge of the University of Wisconsin extension courses in accounting at Milwaukee. He is a Wisconsin C.P.A.

Joseph C. Myer is dean of St. John's College, School of Accounting, Commerce and Finance, Brooklyn.

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The Accounting Review

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ACCOUNTING PRACTICE IN FRANCE DURING THE PERIOD OF MONETARY INFLATION (1919-1927)

MAX J. WASSERMAN

I. INTRODUCTION

DURING and after the World War, France, like many other belligerents, failed to meet her current budgetary expenditures from the revenues arising from taxation. The deficit each year was met by borrowing: the Bank of France made large loans to the government and the state had recourse to borrowing on both the domestic and foreign markets. With each loan which the Bank of France made the government, its bank note circulation was increased. Specie payments were stopped and France was, temporarily at least, on an irredeemable paper money standard. Through this process, as the following table, number 1, will show, the

TABLE I

Note Circulation of the Bank of France in Billions of Francs[1]

1913	5.7	1921	37.7
1914	7.3	1922	36.4
1915	12.3	1923	37.4
1916	15.6	1924	39.9
1917	19.8	1925	44.1
1918	27.8	1926	53.4
1919	34.7	1927	53.5
1920	38.2		

note circulation of the Bank of France increased steadily between 1914 and 1927. This large increase, almost tenfold, in the emission of irredeemable paper money constituted fiat money inflation of perhaps the simplest and most direct type.

[1] Source: The *Annuaire Statistique* published by the Statistique Générale de la France, vol. 44, 1928, p. 83 of the section entitled, *Résumé Rétrospectif*. The figures presented show the yearly average circulation.

The table, number 2, shows the government borrowing through the emission of bonds and notes. This great increase in the public indebtedness gave rise to indirect in-

TABLE II

The French Public Debt in Billions of Francs[2]

	Consolidated Debt	*Floating Debt*	*Foreign Debt*
1913	25.3	1.5	0.0
1918	64.4	33.5	20.4
1919	61.5	56.0	27.3
1920	91.2	79.2	63.4
1921	118.6	86.1	75.2
1922	118.8	87.1	74.9
1923	110.7	89.2	117.0
1924	110.5	87.0	139.0
1925	111.0	86.6	136.0
1926	116.9	93.4	196.0
1927	121.2	93.5	178.0

flation, to which some economists have given the name of "credit inflation." Though its action may be indirect, it is none the less real, because, by reason of the loans the purchasing power of the French people was increased. In the case of the domestic debt, both consolidated and floating, we have first a mere transfer of purchasing power from the subscribers to the loan to the government and then from the government to its functionaries and purveyors in the form of salaries and payments for merchandise. But the bonds, once in the hands of the public, were used as collateral to secure loans from the banks, constituting an increase in, or an inflation of credit. Through the op-

[2] Source: *ibid.* p. 162. The figures given represent the situation of the public debt on the first of January of each year.

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eration of the foreign loans, the bonds found their way into the hands of foreigners and the funds received by the French were used largely to pay for goods purchased abroad. But some of the proceeds of these loans were employed in the domestic market thus making for an increase in the French purchasing power and constituting inflation.

The results of this inflation were far-reaching and many new problems were created for the business man. Depending upon the attitude one holds with reference to the quantity theory of money, inflation either created these problems through its effect in bringing about a very rapid increase in prices, or these problems, created by other economic processes than by action on prices, finally resulted in a marked increase in prices. Whatever merits these two opposing views may have, an important problem for the individual business unit was either brought about by this increase in prices, or manifested itself in the form of an increase in prices. Another problem arose from the fact that the franc depreciated on the foreign exchanges, while a third problem was due to the fact that all prices did not respond in the same manner to inflation conditions; that is, some prices rose more rapidly than others. Finally a fourth problem was brought about by the failure of French gold prices to maintain the same level as did prices in countries on a gold standard. Table number 3 shows the movements of various price series during the period 1919-1927. Although, as the preceding tables indicated, inflation existed from 1914 to 1927, the war period, 1914-1918 has been eliminated in this study.[3] Column 1 of the table gives the figures of a general wholesale price index.[4] Column 2 shows an index of Franco-American exchange rates.[5] Column 3 gives the movement of French wholesale prices expressed in terms of dollars[6] for comparison with the wholesale prices in the United States which are given in column 4.[7] Columns 5 to 11 inclusive give the figures for French retail prices,[8] industrial goods,[9] agricultural goods,[10] textiles,[11] minerals and metals,[12] domestic gods,[13] and imported goods.[14]

Such inflation is not without its effect upon accounting. Since accounting attempts to interpret the results of business operations in terms of prices, to show, at given periods, the financial situation of a business in terms of prices, and since the only calculus which it employs is cast likewise in prices and the only values with which it deals are price values, the rapid increase in prices rendered the results of

[3] During the war period French economic life was largely oriented towards the problem of national defense. The effects of inflation on prices were obscured by the heavy demand for the products of the war industries, the light demand for the products of the others, the curtailed supplies of materials and men, the government regulations and price fixing, the heavy imports of goods, and the "pegging" of the exchange rates. It was not until 1919 that the full effects of inflation upon prices could be isolated and studied.

[4] *Annuaire Statistique de la Statistique Générale de la France*, vol. 44, 1928, p. 115 of the section entitled, *Résumé Rétrospectif*. Base: July, 1914.

[5] The index of Franco-American exchange rates is regularly published in the *Bulletin de la Statistique Générale de la France*. This was the source of the index.

[6] Data published in the *Bulletin de la Statistique Générale de la France*. Base is July, 1914.

[7] This is the wholesale price index of the Bureau of Labor changed, for purposes of comparison with the French indices, to a July, 1914 base. In this form, it is regularly published in the *Bulletin de la Statistique Générale de la France*.

[8] Taken from the *Annuaire Statistique de la Statistique Générale de la France*, vol. 44, 1928, p. 116 of the *Résumé Rétrospectif* section. Base: July, 1914.

[9] The figures given were taken from the issues of the *Bulletin de la Statistique Générale de la France* published during the period covered, where they appeared regularly. Base: 1901-1910.

[10] The figures were taken from the issues of the *Bulletin de la Statistique Générale de la France* published during the period covered. Base, 1901-1910 = 100.

[11] Base: 1901-1910. Source: *Bulletin de la Statistique Générale de la France* issued during the period covered.

[12] Base: 1901-1910. Source: *Bulletin de la Statistique Générale de la France*.

[13] Base: July, 1914. Source: *Bulletin de la Statistique Générale de la France*, with the exception of the data for 1922, which were incorrectly given in this *Bulletin*. The correct figures for this year were furnished by an employée of the *Statistique Générale*.

[14] Base: July, 1914. Source: *Bulletin de la Statistique Générale de la France*.

TABLE III

INDICES OF THE MOVEMENTS OF FRENCH PRICES DURING INFLATION, 1919–1927

(Average Monthly Price)

	1	2	3	4	5	6	7	8	9	10	11
Year	General Wholesale Prices	Franco-American Exchange Rate	French Wholesale Prices in Dollars	Wholesale Prices in the United States	General Retail Prices	Prices of Industrial Goods	Prices of Agricultural Goods	Prices of Textile Products	Prices of Minerals and Metals	Prices of Domestic Goods	Prices of Imported Goods
1919	364	141	268	215	260	430	389	520	327	386	323
1920	519	283	187	244	371	635	532	803	538	513	534
1921	352	257	137	155	337	389	410	416	330	389	287
1922	334	238	141	154	301	379	373	457	323	355	295
1923	428	319	134	159	332	506	458	656	470	441	405
1924	499	373	134	155	380	598	523	849	526	489	516
1925	561	410	138	164	425	691	566	951	616	533	612
1926	718	607	119	156	554	876	732	1,095	873	667	810
1927	630	492	129	150	557	732	691	888	687	626	658

ordinary accounting methods unsatisfactory. The usual accounting methods failed to show with any accuracy both the results of business operations and the position of the business unit at given financial dates. Accounting has also the function of furnishing the business enterpriser with precise reports and data for the determination of the policy and the control of his business. The movements of prices at this time rendered the usual accounting data and reports incomplete—often misleading—to such a point that accounting no longer, under its usual methods, constituted a sure guide. The following section will show the nature of these accounting difficulties,[15] while a succeeding section will show the various means devised to meet these new problems, and a final section will indicate the extent to which these various means were used, as well as present briefly the results of their use, and indicate some possible conclusions to be drawn for the general science of accounting as it is at present practiced.

II. Accounting Problems Presented by Inflation Prices.

In general accounting practice it is customary to enter the items in the books at the prices stipulated in the instruments giving rise to the accounting entry or at the current market value for entries which do not result from a transaction. In times of monetary stability this procedure is satisfactory, for the market values expressed in the books of account remain relatively the same over short periods of time, at least. Thus, the financial statements at the end of the year ordinarily indicated

[15] The increase in prices was not the only movement that these indices present. If the monthly data were given some of them would show a seasonal variation, and all of them would show the cyclical movement of the periods 1919-1922, 1923-1924, and 1925-1927. The upward secular trend of the series was not steady, but tended to move in cycles. It was during the upward swing of these cycles, especially in 1925-1926, that the accounting difficulties were particularly manifest. From a point of view of price theory, however, it is important to notice that the response of prices to inflation did not result in a smooth ascending movement.

with reasonably veracity the financial position of the business and the results of the year's operations. In periods of rapidly depreciating paper money accompanied by equally rapidly increasing prices, as was the case in France during the period 1919-1927, this practice ceased to give truthful results. An example will illustrate this fact. A French enterprise founded before the war did business steadily throughout the war and inflation periods. The balance sheet of the firm, as of December 31, 1926, let it be assumed, presented the following figures:

Assets

	francs
Plant	100,000
Equipment	50,000
Inventory	25,000
Accounts Rec.	25,000
Cash	10,000
	210,000

Liabilities

	francs
Capital Stock	75,000
Bonds	50,000
Depreciation	60,000
Reserves	5,000
Accounts Payable	15,000
Surplus	5,000
	210,000

This balance sheet does not give a true picture of the business. In the first place, the plant, acquired before the war, is worth much more in terms of paper francs than 100,000 francs—it would cost six or seven times as much to reproduce. The same remark is also true as regards the equipment. It must be carefully noted, though, that the increase in paper franc value of these two items is not appreciation—it might properly be termed quasi-appreciation—and the readjustment of this account, as will be seen later, should not be handled as real appreciation.

The book value of the inventory, entered at cost, no longer reflects anything approaching the real market value of the stocks although this account is more accurate than plant and equipment. The degree of exactitude of its book value depends upon the period of turnover of the business in question. The stocks of raw materials, goods in process, and manufactured goods were gradually acquired during the past few months. The book value of those elements recently acquired will be more accurate than that of those acquired at earlier dates. It is evident that a thorough re-evaluation of these accounts is needed.

The book value of accounts receivable is exact. This account is based upon contractual agreements with the customers of the firm who agreed to pay a definite sum in paper francs. No matter how far the franc depreciates, or how high the general level of prices goes, they cannot be obliged to pay more than the stipulated amount.[16] The cash account is also exact. It is evident that the cash on hand does not increase with the general level of prices, and that the bank cannot be forced to pay its depositors any more than they have deposited in terms of paper francs. But the paper franc value of these two accounts tells us very little about their actual purchasing power. The decline in their purchasing power, as will later be seen, con-

[16] From a point of view of maintaining the working capital intact this fact was of vital importance to French business enterprises during the inflation period. Whenever credit was extended on open account to the customers during a period of rising prices, the firm was repaid in depreciated francs, that is, in francs having a lower purchasing power. The longer the period of credit, the lower the purchasing power of the francs received finally from the sale of goods. This practice did much to reduce the effective working capital of some firms during inflation. While the nominal value of the working capital was maintained, and in most cases increased, its purchasing power or its gold value declined very steadily. Of course, if the company received equal credit terms from its creditors that it extended its clients, then the working capital showed no depletion, and if shorter terms and amounts were extended than it received, then the working capital increased. It was only those firms who extended larger credit terms and amounts than they received who suffered. It would have been fairer all around to stabilize credit extensions by employing sales contracts drawn in terms of gold francs or other stable monetary units. It is interesting to note that in classical monetary theory, inflation is supposed *always* to benefit enterprisers who are able to repay their debts in depreciated money. This is evidently an incomplete analysis of the real situation.

stitutes a real loss to the business. The loss on this account should properly be shown in the books. Ordinary accounting methods, as the balance sheet shows, fails to do this.

On the liability side of the balance sheet the capital stock account, expressing a legal relationship, must always remain exact. Further, the nominal value carried on the books is of but little consequence since it corresponds but little to reality. A share of capital stock represents a residual interest in the assets of the business, and in practice the par or book value of a share seldom corresponds to any real value. The movement towards the use of no par value stock in America is an evidence of this fact.

The account for bonds is also always exact since it expresses a legal relation. The corporation can only be obliged to pay back the bonds in terms of nominal francs.[17] However, the depreciation of the purchasing power of the bonds constitutes an element of profit for the business which classical inflation theorists have long stressed. Unfortunately the books do not show this gain and it would be wise to install an accounting method which would bring out this element of profit.

Depreciation presented a different problem which, unfortunately, was not always clearly grasped by business men. If it be assumed that the plant and equipment of this firm were purchased in 1914, and that their life was estimated at 30 years, then it would obviously be necessary to charge off 5,000 francs a year for depreciation. By December 31, 1926, the date of the balance sheet, there would have been exactly 60,000 francs depreciation reserve (12 × 5,000 francs) as is shown by the balance sheet. By 1944, the depreciation reserve account would show 150,000 francs, the book value of the plant and equipment. But unless the franc was brought back to its pre-war value (evidently very improbable as the facts since 1926 have shown) the corporation could not replace the plant and equipment with the sum reserved. In all probability, judging by the movement of prices, it would cost close to one million paper francs to reconstitute these items. It is quite evident that depreciation should have been increased. If the plant and equipment were carried on the books at their replacement prices, this discrepancy would stand out at once. Assuming that the replacement or gold value of the plant was six times its cost,[18] the balance sheet should carry it at 900,000 paper francs. In 1926 the plant was 12 years old and therefore should be depreciated 2/5 of its value, or 360,000 paper francs. The depreciation reserve account shows a depreciation amount of but 60,000 francs or but 1/30 of the value. It is quite evident that drastic measures would be needed in order to reserve such a sum as would permit this asset to remain intact as plant. Had such an amount been set aside as soon as prices started to rise, this situation would not have arisen. Accounting, through the use of the usual measures, failed to bring this fact out in the balance sheet.[19] It is

[17] Almost all the bonds issued by French corporations were drawn up in terms of "francs" which the courts invariably interpreted, as far as domestic corporations were concerned, to mean paper francs. It is also very doubtful if any French court would have sustained a clause providing for the reimbursement of bonds in terms of gold francs, even if this clause had been inserted prior to the war. Naturally, for foreign corporations which had sold bonds on the French market, the courts took a different attitude and generally stipulated for repayment in gold francs, even in the absence of this clause.

[18] This figure was based upon the index number of general wholesale prices which stood at 640 for December, 1926.

[19] It has been assumed throughout this discussion that the purpose of depreciation is to provide the means of replacing exhausted equipment. Space does not permit the discussion of a possible alternative purpose; namely, that depreciation accounting exists only to spread past costs over subsequent periods. A part of the blame for the failure of business men to depreciate the fixed assets sufficiently must be placed at the feet of the fisc. All French business enterprises were subject to the national income tax, levied on the net income of the business. There was naturally much discussion and litigation concerning the deductions to be made from gross profits in order to determine net profits; the business men desiring to make as many deductions as possible, and the officers of the fisc seeking to reduce the permitted deductions to a mini-

evident, of course, that these criticisms could not apply to a bond amortization account.

The account, Reserves, expresses a value in terms of depreciated paper francs. If the firm has been setting aside a fixed sum, or a fixed percentage of surplus, each year as a provision for business contingencies it would be necessary, just as was the case with the depreciation, to increase the amount in paper francs at a rate corresponding to the depreciation of this medium of payment. This is especially important in view of the fact that any contingencies which arise are certain to cost more in paper francs than they would have cost in the absence of any inflation. At the date of the balance sheet their cost would have been about six times as great. The need for greater provision is manifest and should be shown by the accounts.

The same remarks which were made with reference to accounts receivable apply with equal force to accounts payable. In this case, however, the rise in prices works to the advantage of the firm, and not to its disadvantage as was the case with accounts receivable.

In view of the readjustments to be made in the balance sheet the surplus can hardly be said to represent with any accuracy the earnings of, or the accretions to, the business. If depreciation was brought up to the amount indicated in a previous paragraph the surplus account would disappear entirely and a new account, loss, would appear on the assets side. If the plant, equipment, and inventory accounts were brought up to their actual market or replacement value, the surplus account would appear much larger than it actually is, but if surplus be debited for the full amount of the depreciation its balance would be reduced considerably. It is, however, to be doubted if the increased value of the plant would form a proper credit to the surplus account; it would appear better and clearer practice to create a special account to take care of this increase. Certainly, it would not constitute good or conservative business practice to pay out this quasi-appreciation in the form of dividends —this might result if the quasi-appreciation were credited to surplus.

Some of the French theorists appear to feel that re-evaluation of the plant and equipment might possibly give rise to a credit to the capital stock account.[20] It

mum. Among many other decisions of the fisc which were sustained by the courts the one concerning depreciation was doubtless the most important. The fisc refused to recognize the depreciation of the plant and equipment at its real or replacement value, only allowing the enterpriser to deduct an amount sufficient to amortize the plant at its cost or book value. Of course, enterprisers could deduct any amount of depreciation they desired on their books of account, but the fisc, for purposes of taxation, would add back to get the net taxable income any amount in excess of the book value depreciation. In the case under discussion, the fisc would allow the enterprise to deduct 5,000 francs depreciation each year, based upon an estimated total life of 30 years and upon the book value or cost of the plant and equipment, 150,000 francs. If the enterpriser desired to depreciate at the rate of 30,000 francs a year, based upon the same life but upon the real or replacement value of the plant, 900,000 francs, it was free to do so, but the fisc then added 25,000 francs to net income in order to determine the tax. It is rather difficult for an economist to follow the legal arguments invoked to sustain this decision. The economic effect, however, was twofold. In the first place business firms were taxed upon income which they had not earned, and in the second place business men were deterred from making proper provisions for the replacement of their plants. On the subject of depreciation (in French, *amortisation*) during inflation see the following works among others: Bisson, André, *Le bénéfice réél en periode de dépréciation monétaire*, Paris (Sirey), 1926, pp. 6-9; Ratier, A. E., "L'évolution du point de vue fiscal en matière d'amortissements," *Experta*, no. 33, June 1927, pp. 32-33; Anonymous, "Le calcul des amortissements sur la valeur de remplacement du matériel," *l'Usine*, April 16, 1927, p. 3; Anonymous, "Comment établir un bilan—l'importante question des amortissements," *l'Usine*, March 5, 1927, p. 3; Fain, G., "Amortissements industriels," *La comptabilité et les affaires*, no. 87, March 1927, pp. 74-78; Baudeux, A., *Les charges fiscales des sociétés anonymes commerciales françaises*," Thesis for the doctorate, University of Paris, 1926; Durand, R., "Le fisc dans ses rapports avec les entreprises ayant adopté une comptabilité en francs-or," *Mon Bureau*, no. 150, April 1926, pp. 513-514; Gingembre, L., *De l'imposition des plus-values en droit français*, Paris (Commerce des Idées), 1928; Lefebvre, R., *L'impôt sur les plus-values d'après les récents projets français*, Paris (Rousseau), 1927.

[20] Cf., notably, Bayart, Pierre, *Les effets de l'inflation le bilan au point de vue fiscal*, Paris (Sirey), 1926, pp. 166-182. It must be carefully noted that M. Bayart does not recommend this practice; he prefers to reduce the balance sheets to terms of

may further be asked if the surplus account as shown on the above balance sheet is a true surplus, or if it has arisen because of the fact that the capital stock and bonds are maintained on the balance sheet at their original or gold value.[21] In the present case this is not true, for the re-evaluated plant and equipment (150,000 francs) would represent a larger sum than the re-evaluated stocks and bonds (125,000 francs) provided, of course, that the same coefficient of re-evaluation is employed throughout. In other cases, however, where the business has a small plant and equipment relative to the capital stock and bonds, a re-evaluation of the balance sheet would give rise to a fictitious surplus which is not due to purely business operations. In the present case, the surplus is due in part to a failure to maintain a replacement policy of depreciation.

The surplus is also inexact in that it fails to show the accretions and depletions of the business which are due to the decline in the purchasing power of the nominal amounts inscribed for accounts receivable and payable as well as cash. The variations in the purchasing power of these accounts properly constitute debits and credits to profit and loss or surplus. Ordinary accounting methods make no provisions for this and therefore the surplus account must remain inexact under these systems.

Due to causes such as this, it is quite conceivable that the balance sheet show a surplus which is a pure fiction, not due even to a failure to maintain the depreciation at its correct amount. This appears clearly when the balance sheet is reduced to its gold value by the method explained in the succeeding section.[22] This can very well be the case where the fixed assets are relatively small, the liquid assets relatively large, the short term debts small, or the capitalization relatively large.

Another source of deficit comes about through the normal operations of the business by a failure to sell at a remunerative price—which, under inflation, as will be seen in the succeeding paragraphs, consists of selling on a basis of what the French called "replacement prices" *(prix de remplacement)*. The accounts, maintained in the usual fashion, and consequently the balance sheet, will show a profit or surplus whenever the goods are sold for more than the total cost. But if this selling price does not permit the business to restock the goods sold, then the profit fails to correspond to any liquid assets, and disappears when the balance sheet is expressed in terms of gold francs.

The problem of the surplus is, of course, closely allied to the profit and loss accounts and statements as well as to the cost accounts. Under inflation the usual methods of keeping these accounts gave no more satisfactory results than was the case with the balance sheets. A consideration of the following statement may serve to illustrate and explain this point: In this statement it is assumed that all goods produced are sold.

		Paper francs
Net sales		100,000
Cost of materials	25,000	
Labor cost	25,000	
Prime cost of goods sold	50,000	
Factory overhead	10,000	
Factory cost of goods sold		60,000
Gross profit		40,000
Administrative and selling expense	10,000	
Other expenses and deductions	10,000	
		20,000
Net profit		20,000

This statement, cast in terms of depreciated paper francs, shows a net profit of 20,000 francs. All of the deductions from net sales have been entered at their actual cost at the time that the expenditures were

gold francs. The paper franc re-evaluated balance sheets which he gives are merely illustrative examples, or rather proofs, used to substantiate the accounting methods which he advocates.

[21] Cf. Bayart, Pierre, *op. cit.*, note 1, p. 173.

[22] See the examples given by Bayart, Pierre, *op. cit.*, pp. 166-167, 170-171, and Delavelle, Emile, *La comptabilité en francs-or*, Paris (Nouvelle Librairie Nationale), 1924, pp. 57-63.

made. As the statement now stands, this net profit of 10,000 may be a pure fiction and not find its counterpart in any of the working capital assets accounts, and it may conceal a real loss.[23] During the manufacturing period (or the turnover period if we are dealing with a trading enterprise) the prices of all the elements which enter the finished product are increasing. The raw materials are increasing in price—as the figures presented in Table 3 would lead one to conclude—especially if they are imported from countries on a gold standard such as the United States or England. Factory labor is fairly well organized and is constantly obtaining wage increases.[24] The elements of factory overhead, light, heat, rent, taxes, power, etc., are being constantly increased as are the other elements of cost. But the profit and loss statement presents these elements at their price at the time that they were incurred. If the statement showed the costs of material, labor, and other expenses, *at the time of the sale of the goods*, the surplus, as shown on the statement, would either be much smaller or would be a negative quantity—a loss. Such a procedure would represent with greater accuracy the net result of the business operations than does the present practice; for the surplus shown does not find its full counterpart in the net working capital assets since a larger sum of money was needed to replace the goods sold than their total cost as indicated by the cost accounts and, in many practical instances, a larger sum of money was needed to replace the goods sold than was received by their sale. A surplus or profit under these conditions is likely to prove misleading. Profit can only be calculated upon cost of production when the monetary unit is relatively stable—it is only under this condition that the profit will reflect itself fully in working capital. Where money is undergoing a rapid depreciation and where costs are rising with equal or greater rapidity, then profit must be figured on the cost of the reproduction or replacement of the materials and labor sold. This conception may appear false to those accountants to whom gross profits must always equal net sales minus total cost of production, but even the most traditionally minded must admit that profits which have no counterpart in net working capital are purely fictitious. During certain periods profits, in order to possess any reality, must be figured upon cost of reproduction rather than cost of production.[25]

Closely allied to the problem of the correct calculation of profits is the use of accounting statements of cost of production as a guide to managerial price policy. In many lines of business it is customary for the directors or managers of the business to price the product or merchandise on a basis of cost of production. The underlying data for this calculation are furnished by the accounting department in the form of cost statements. During inflation, however, if the working capital of the business is to be maintained intact, prices cannot be based upon cost of production—they must

[23] See Bisson, André, *Le benefice réél en période de dépréciation monétaire*, Paris (Sirey), 1926, pp. 9-11; Faure, Gabriel, *Bilans et comptes en francs-or*, Paris (Nouvelle Librairie Nationale), 1926, pp. 17-22; Raffegeau, P. C., and Lacout, A., *Etablissement des bilans-or*, Paris (Payot), 1926, pp. 40-43; Thomas, Lucien, *La tenue des comptabilités en période d'instabilité monétaire*, Paris (Editions Experta), 1927, pp. 15-19.

[24] For statistics of the increase in wages see, especially, Dubas-Delos, L., *Le prix de revient industriel*, Thesis for the doctorate, University of Lille, 1928, p. 80; *Bulletin de la Statistique Générale de la France*, July, 1926, p. 421, July-Sept., 1927, p. 407.

[25] From a speculative point of view it would be interesting to note that just the same procedure is needed during periods of price deflation; that is, periods where money is being retired from circulation and credit being restricted. Here we would expect to have a period of falling prices and if profits were determined by deducting costs of production from net sales the profit account would show smaller accretions than actually would be the case if costs were deducted at replacement prices. Here the net working capital would grow much faster than the profits, indicating a too conservative calculation of profits. If costs were again based upon a reproduction rather than a production basis, since prices are falling, they would appear smaller and the net profits larger. This reproduction costs method is to be recommended since it is in closer conformity to the real results of the business operations than the cost of production methods.

be based on cost of reproduction or replacement (*prix de remplacement*).[26] If prices are based upon cost of production or acquisition during a period of rising prices the monies or credits received from the sale of goods will not permit the business to reproduce or restock the same amount of goods as were sold at these prices. For during the period of manufacturing or stocking the prices of the goods purchased, raw materials, labor, and other costs will have risen. It will evidently take greater funds to restock after this period than it did at the beginning and if provision has not been made in the selling price for this rise then the working capital will decline.[27] The usual accounting methods cast their cost data in terms of cost of production. This, of course, will permit the business managers to estimate or figure reproduction costs for purposes of pricing, but, in many instances, it would be preferable that the accounting department be able to furnish cost data for any parts of the merchandise based upon the cost of reproduction at a particular moment. The usual cost accounting methods here are incomplete and inadequate for the formulation of a price policy and do not furnish a certain method of control, because they are based upon actual cost outlays.

These are the most important accounting problems which inflation in France conditioned and which usual accounting methods failed to solve. The following section will show the solutions which the leading French theoreticians and practicians proposed for their solution and the modifications which customary accounting underwent under these circumstances.

III. French Accounting Methods for Inflation

Faced with these accounting problems, the French accounting theoreticians were not long in proposing solutions. In this matter they had the advantage of the earlier German experience and some of the new accounting methods proposed were but adaptations of German inflation accounting theory and practice while others constituted distinct contributions to the science. M. Lucien Thomas, in his splendid contribution to inflation accounting theory and method, *La tenue des comptabilités en période d'instabilité monétaire*,[28] has classified the French inflation accounting methods in four groups, to which his own must be added, making a total of five groups:

1. Bookkeeping in terms of paper francs with the use of "correcting accounts" (*comptes correctifs*).

2. The use of ordinary bookkeeping methods cast in terms of depreciated paper francs corrected so as to give a balance sheet in terms of gold francs.

3. The use of ordinary bookkeeping methods cast in terms of paper francs sup-

[26] This is the famous "replacement price theory" (*théorie du prix de remplacement*) which received so much attention in France during the inflation years. There is reason to believe that this theory was not original with the French; it was probably imported from Germany where German enterprises, working under a much more rapid and severe inflation than the French, were obliged to take vigorous means for the conservation of their affairs. As a matter of fact, many of the French proponents of this theory had studied inflation in Germany prior to their advocacy of the theory in France. Even during stable money times, many enterprises, especially those dealing in imported materials or products for which there was an international market, applied the replacement price theory. See: Fain, Gael, *Comment se défendre contre l'inflation*, printed lecture, Paris (Compagnie des Chefs de Comptabilité de la Région Parisienne, 47 rue Cambon), no date, pp. 4-9; Beaupère, Louis, *Les troubles monétaires et la vie des entreprises*, Paris (Jouve), 1927, pp. 70-80.

[27] The failure to apply the theory of replacement prices cost many French enterprises dearly. In spite of a rapidly increasing market and sales of goods, some enterprisers found themselves with a constantly decreasing working capital. In view of inflation conditions the banks were not inclined to make any large advances to business men for working capital purposes, because the purchasing power of the enterpriser's notes declined as prices rose. Business firms therefore had recourse to the security market. The issues of new securities, especially stocks, were, during inflation, larger than one would expect. These stocks were not issued to augment the fixed plant and equipment; the proceeds were used to replenish the declining working capital.

[28] Published in Paris, 1927, by *Editions Experta*, 71 rue Desnouettes, the publishing branch of the important accounting and business forms company, M. Dequeker et Cie. See pages 31-35 for M. Thomas' classification.

plemented by annual or monthly correcting entries giving rise to balance sheets in terms of both corrected paper and gold francs at the end of the year.

4. Four column bookkeeping; two columns for paper francs and two for gold francs.

5. Bookkeeping in terms of paper and gold francs with the use of a special "regulating and compensating account" (*compte régulateur et compensateur*).

In the following description the order of presentation indicated by M. Thomas has been changed. The use of ordinary accounting methods in terms of paper francs, supplemented by the creation of gold-franc balance sheets, will be examined first.

1. *Paper Franc Accounting Supplemented by the Establishment of Balance Sheets in Terms of Gold Francs.*

This system, widely employed in France during the inflation years, consists of the use of the normal system of accounts in terms of depreciated paper francs with its resulting annual or monthly paper franc balance sheet restated in terms of gold francs. The practice thus required no changes or adjustments in the traditional methods of keeping the accounts. The paper franc balance sheet was simply restated in terms of gold francs. This procedure was followed by many French enterprises which were opposed to the use of any more complete inflation accounting systems.[29] It is a simple matter to translate paper franc balance sheets to gold franc balance sheets: all the accounts on the former, with the exception of the fixed assets and capital, are divided by the coefficient of exchange rates between France and some gold standard country, generally the United States. The coefficient of exchange is obtained by dividing, say, the actual rate of Franco-American exchange by the par of exchange.[30] The fixed assets and capital accounts, unless they were acquired during inflation, are not divided by this coefficient, because they already stand on the books at their gold value. If they were acquired after inflation, they must be adjusted just as the other accounts. The publications which appeared on the subject of inflation accounting methods abound in examples of these restated balance sheets. The following example is taken from Bayart, Pierre, *Les effects de l'inflation sur le bilan au point de vue fiscal*, Paris (Sirey), 1926, pp. 170-176. This is not an imaginary case; the balance sheet was taken from the French financial publication the *Cote Desfossez*, is dated December 31, 1923, and is the actual balance sheet of a French corporation (*Société Anonyme*) which the author does not name. The balance sheet was given in the *Cote Desfossez* in terms of depreciated paper francs. The author, with the collaboration of M. Hilde, professor of accountancy at the Chamber of Commerce School, has reduced this balance sheet to its expression in terms of gold francs using a coefficient of dollar exchange of 4. This coefficient of exchange corresponds to a rate of exchange of 20.7304 francs to the dollar, or 1 franc equals $0.0483—depending upon the manner of quoting the rates. This figure, while not absolutely exact, declares the author, corresponds sufficiently to the actual rate for purposes of illustration.[31]

[29] This information was obtained by means of interviews with French business men and accountants—public and private—and by the use of questionnaires sent out to the chief accountants of the more important enterprises. In the course of the author's investigation of the effects of inflation in France, more than 500 interviews were held, taken down in shorthand by a secretary, and then transcribed. About 20 chief accountants replied to the questionnaires sent out. The system here outlined was recommended by the Fédération Industrielle et Commerçiale de Roubaix-Turcoing, a leading industrial and commercial group representing the woolen goods industry. See Thomas, Lucien, *op. cit.*, p. 32.

[30] There was some discussion as to the use of exchange rates or index numbers of prices in this process of reducing balance sheets to their "true value." Most of the French accountants, following in this the ideas of their German colleagues, preferred the use of the coefficient of exchange rates. A few eminent specialists, however, did not share this opinion.

[31] This balance sheets may prove confusing to the American accountant who is not familiar with French accounting practice. In the first place its arrangement does not follow the logical American

ASSETS			LIABILITIES		
	Depreciated paper francs	*Gold francs*		*Depreciated paper francs*	*Gold francs*
Plant and Good Will ...	850,000	850,000	Capital Stock.....	9,000,000	9,000,000
Lands, material.....	7,000,000	7,000,000	4% Loan Bonds.....	7,000,000	1,750,000
Cash and in Bank.....	4,240,000	1,060,000	Legal Reserves.....	196,000	.....
Defense Bonds.....	760,000	190,000	Litigation Reserve....	108,000	27,000
5% Rente Bonds.....	972,000	243,000	War Taxes.....	188,000	47,000
Notes Receivable.....	920,000	230,000	Profits Tax.....	220,000	55,000
Rent paid in Advance...	6,000	1,500	Depreciation.....	2,800,000	2,800,000
Merchandise.....	3,600,000	900,000	Accounts Payable....	3,800,000	950,000
Horses, Wagons, etc.....	1,800,000	450,000	Dividends Due.....	16,000	4,000
Accounts Receivable....	1,800,000	450,000	Interest Coupons Due.	168,000	42,000
Due from Shareholders..	2,250,000	562,500	Paper Franc Profits...	702,000	.....
Gold Depreciation.....		2,738,000			
	24,198,000	14,675,000		24,198,000	14,675,000

In making this conversion the accounts Plant and Good Will, Lands and Material, Capital, and Depreciation show the same amounts in terms of gold francs as they did in paper francs. All the other accounts have been divided by the coefficient 4. The fixed assets, since they were acquired before the war, were entered at their gold value. The capital stock is doubtless regarded in the same way. In view of the fact that the bonded indebtedness of the company is reduced to its gold value, one may well ask why the capital stock was not similarly treated. Had it been reduced to its gold value the new asset account, Gold Depreciation, would have disappeared and a surplus or profits account would be found in the gold franc column. The question does not appear to be a vital one. In the balance sheet of all corporations which have done business for any length of time, the amount set opposite capital stock no longer corresponds to any reality. It is only through liquidation or purchase that the value of this element has any real meaning. In the present case, the book value of the proprietorship would consist of the capital minus the gold depreciation. Had the capital stock been reduced to its gold value, the proprietorship would then be determined by adding the gold value of the capital to that of the new surplus which would appear. The difference in the former case would exactly equal the sum in the latter. We are here faced, however, with a minor problem of principle and procedure and the author inclines to agree with the solution presented in the balance sheet.[82] This solution has the advantage of presenting the exact result of the business operations which have really resulted in a deficit or loss rather than a surplus. If the capital stock is expressed in terms of gold francs a surplus will appear on the balance sheet which is the result of mere adjustments. Of course, it can be maintained that the gold depreciation is likewise the result of an adjustment—the translation of the accounts into their gold value. But this adjustment is made with the purpose of determining the true position of the business and results of its operations. An adjustment to the capital account is but a change in the expression of proprietorship, which is unnecessary in order to determine the position or the results of the business.

The depreciation account shows the same amount in terms of gold that it does in

procedure, based upon liquidity. Then the names of the accounts are unfamiliar. The author has endeavored to translate the French terms by their equivalent American expression wherever this was possible.

[82] Emile Delavelle, in *La comptabilité en francs-or*, Paris (Nouvelle Librairie Nationale), 2d. ed. 1924, pp. 57-63, handles the capital stock account in the same manner.

terms of paper. This has been done so that the depreciation account will reflect the true depletion of the plant. As was described in the preceding section, the depreciation account should be credited with the equivalent in depreciated paper francs of the gold franc depreciation of the plant. This has not previously been done by this corporation which evidently had been satisfied to credit the same amount in paper francs each year without taking into account the depreciation of the paper money. Assuming that the annual depreciation was correctly determined in the first place, the depreciation account can then be brought to its proper value by placing, in the gold franc column, the same amount as the paper franc column carries.

The asset account, Gold Depreciation, expresses the deficit of the business. It might at first be thought that this deficit arose because depreciation was brought up to the correct amount. A calculation will show that this is not the case. If no change was made in the amount of depreciation charged to profits, the gold franc amount for this account would be 650,000 francs (2,800,000÷4=650,000) instead of 2,800,000 francs. This would reduce the asset account, Gold Depreciation, by 2,150,000 francs (2,800,000—650,000= 2,150,000) leaving a net gold depreciation of but 588,000 francs. While the larger part of this deficit is due to the adjustment of the depreciation account, 588,000 represents a loss which is independent of any depreciation adjustment.

The account, Legal Reserve, shows in the paper franc column but not in the gold franc column. This is due to the nature of this reserve. French corporations are required to set aside a certain proportion of their net surplus in the form of a reserve to which the name legal reserve (*réserve légale*) is generally given. Since the gold franc balance sheet fails to show any surplus, this account necessarily does not appear in its columns.

While the gold franc balance sheet method recommends itself by reason of the fact that it dispels some of the illusions which ordinary balance sheets are apt to create in times of inflation as well as by the economy of its preparation, it does not furnish business managers with any great fund of information upon which to conduct their affairs during such trying times. The system of balance sheet readjustment does not tell us very much regarding the results of the business as shown by the statement. The manner in which the surplus arose is not indicated. This could doubtless be determined by recasting the profit and loss account in terms of gold francs, debiting it and crediting it, as the case may be, for the difference between the paper and gold balances of each account adjusted on the balance sheet. This procedure groups in one account the results of the operations of the business and the paper money depreciation of the capital and reserves of the period under consideration as well as that of the previous periods.[33] The account, Gold Depreciation, effectively represents this sum and the profit and loss of the period under study does not appear alone on the balance sheet. The net profit and loss of the period can be determined by a comparison of this gold franc balance sheet with the gold franc balance sheet at the end of the last financial period.[34] Unless the balance sheets are thus regularly translated into gold francs, the periodical business profits and loss cannot be determined. This is, of course, a very real disadvantage as such information is indispensable to the business manager.

MM. Raffegeau and Lacout have developed a system of accounting adjustment affording an elegant solution for this problem which they have called "gold money correction by the retrograde method with rectification of the balance sheet for the previous financial period" (*correction en monnaie-or par la méthode rétrograde avec rectification du bilan d'entrée*).[35] In order to grasp this ingenious method it will first

[33] See Raffegeau, P. C., and Lacout, A., *Etablissement des bilans en francs-or*, Paris (Payot), 1926, pp. 94-97.

[34] Raffegeau and Lacout, *op. cit.*, pp. 96-97.

[35] *Op. cit.*, pp. 96-109.

be necessary for us to examine briefly what these authors call the "retrograde method" (*méthode rétrograde*).[36] This system includes the correction of the accounts at the close of the financial period through the evaluation of their balances by the use of index numbers or the coefficient of exchange. The accounts are then rebalanced by crediting or debiting, as the case may be, with the difference between the gold value and the paper value of the balances the profit and loss account. The gold evaluation of the accounts' balance is then, *in the French practice*, debited or credited to the new gold franc balance account. Then the profit and loss credit balance—this account will generally show a credit balance during inflation—is debited to a new account called "capital and reserve depletion" (*dépréciation du capital et des réserves*) which in turn is credited with this amount which is carried as a debit to the new gold Balance Sheet account. The authors here have evidently regarded the balance sheet as an account—this is often the case in French accounting practice. According to American practice each account would be evaluated in terms of gold francs and then the difference between the gold and paper value of the account would be carried to the profit and loss account, but the gold value would be simply drawn off as a "balance" after the account was closed, and would not be debited or credited to a Balance Sheet account. The profit and loss account would be closed out, then, to the Depreciation of Capital account which would stand with the assets on the balance sheet. While it would be interesting to trace MM. Raffegeau and Lacout's system through an abbreviated set of accounts as they do in their book,[37] space will not permit this here. The following Raw Materials account will illustrate the principles outlined above.[38]

The authors are here dealing with paper and gold marks, since they are here studying a German enterprise during the German inflation, 1919-1928.

Raw Materials

Debit

	Marks
Balance	900,000
Credit Purchases	4,500,000
Cash Purchases	900,000
	6,300,000
Balance (American System)	300,000

Credit

	Marks
Production Account	4,800,000
Profit and Loss	1,200,000
Balance forward (American System) or to New Gold Balance Sheet Account (French System)	300,000
	6,300,000

This account shows a total of 6,300,000 mark debits to raw materials and credits, on account of production of 4,800,000, leaving a paper mark balance of 1,500,000. The inventory has been assigned a gold value of 300,000 to this balance using a coefficient of 5. The difference between 1,500,000 and 300,000, 1,200,000 has thus been charged to profit and loss and the sum, 300,000 represents the actual gold value of raw materials on hand. This same procedure is followed with all the accounts which need re-evaluation.

This system, "gold money correction by

[36] *Op. cit.*, pp. 88-96. The authors have also developed, in addition to the "retrograde method," a "progressive method" (*méthode progressive*). See *op. cit.*, pp. 76-88. This method will be described later.

[37] *Op. cit.*, pp. 68-76, 88-96.

[38] *Op. cit.*, p. 90. In presenting this balance sheet the author has illustrated the working of this account according to both the French and American practice. The translations of the entries has been made as follows: Balance: French, *Bilan d'entree.* Literally this means balance sheet for previous financial period. As explained, the balance sheet has been regarded as an account here by the French authors. Consequently, in order to re-open the books after closing the balance sheet is debited or credited for the items it shows which are then carried to the respective accounts. Credit Purchases: French, *Achats a terme.* Cash Purchases: French, *Achats au comptant.* Production Account: French, *Livraisons à la fabrication.* Literally, delivered to production. Profit and Loss: French, *Profits et pertes.*

the retrograde method with rectification of the balance sheet" for the previous period applies the same principles as were illustrated above. A new account, "correction of past (or opening) balance sheet" (*correction du bilan d'entrée*) is introduced, however. Under this system the Raw Materials account, presented above, would take the following aspect:[39]

Raw Materials

Debit

Balance (old)	900,000
Credit Purchases	4,500,000
Cash Purchases	900,000
	6,300,000

Credit

Production Account	4,800,000
Correction of Past Balance Sheet	600,000
Profit and Loss	600,000
Balance (new)	300,000
	6,300,000

At the beginning of the period, this account shows a balance of 900,000 the gold value of which is but 300,000—a coefficient of 3 has been used. The difference between the two figures, 600,000 represents the amount which the previous balance sheet must show. This account is therefore debited with this sum which is then carried as an asset, or credit to this previous balance sheet. As in the past case—since we have the same operations—the new balance was evaluated in gold at 300,000, using a coefficient of 5 since the mark showed a smaller depreciation at the beginning of the period than at the end, the account must now be credited with 600,000 which is debited to profit and loss. In the previous example, the profit and loss account was charged with the sum of 1,200,000 whereas in this case it is charged with but 600,000; therefore there is a difference of 600,000 between the two cases which corresponds exactly to the account, Correction of Past Balance Sheet. This amount represents the decline in the gold value of the opening inventory and should not be charged off to the profit and loss account of the period under study—for it really represents the loss sustained during the previous period. Now under the ordinary system of balance sheet rectification—either by use of the method indicated at the outset of this section or by the retrograde method of MM. Raffegeau and Lacout—the full amount is carried as a loss to the gold depreciation or the capital and reserve depreciation account. Thus the loss due to the period under study cannot be determined. The retrograde method permits this, and therefore constitutes a very real improvement over the simple procedure of balance sheet readjustment outlined at the beginning of the section.

The same procedure that was followed in the raw materials account must also be applied to all the other accounts where a readjustment of paper to gold values is necessary. The amounts shown in the several accounts as debits and credits to the account "Correction of Past Balance Sheet" represents re-evaluations of the old balances and are then carried to an account bearing this name. The debit or credit of each account to profit and loss is determined by the difference between the paper and gold evaluation of the new balance. These amounts are then carried as debits or credits to profit and loss. The account "depreciation of capital and reserves" is then debited or credited with the amounts outstanding in the correction of past balance sheet account. In this way, the balance of the profits and loss account will represent the current results for the period, while the "Depreciation of Capital and Reserve Account" will show the accumulation losses and gains of past periods. The balance sheet will thus normally (under inflation) carry among its assets not only a Depreciation of Capital and Reserves Account, as a sort of past deficit account, but also an account showing the losses of the current period. Of course, this latter account may show a gain, and in this case it would appear with a credit balance on the liability side of the statement.

[39] *Op. cit.*, p. 99.

This method is extremely simple and will not prove very costly to establish. It has the great advantage, over a simple balance sheet restatement, of showing the profit and loss of the period under consideration as well as the depreciation of the capital and reserves. The method outlined by MM. Raffegeau and Lacout implies that entries are made directly to the accounts. In case it is felt to be inadvisable or inexpedient to show these entries on the regular books of account, a special journal and ledger could be drawn up, to which the balances of the paper franc accounts could be transferred, and then all the above outlined adjustments could be made to these accounts, leaving the regular books intact. As will be seen later, this may prove the wiser procedure. However, this does not in any way modify the principles as set forth by these authors.

While this method does show the profit and loss, it gives but little information on the subject of cost of production and would not be particularly recommendable for systems which comprise a set of cost accounts. Although, at the end of the period, the cost accounts would be adjusted so as to show the proper results, it is often desirable to show the cost of a department, of a job, of a unit of production at other than the period when the books are closed. Some costing systems provide for this. Under this system, it would be necessary to make adjustments each time such costing information was desired. Of course, cost accounts would always show the cost of production in terms of paper francs, or in other words, costs based upon the price of acquisition. But during inflation what is really desired is the *cost of replacement*. This is the critical point in the operation of a business—pricing on a basis of cost of reproduction or replacement must form the basis of the price policy if the enterprise is to maintain its working capital intact. Although adjustments could be made at any time to the cost accounts to show this, it might be advisable to construct a set of accounts which would show gold values, or replacement cost values, at all times. The combined method of gold and paper-franc accounting with four columns makes this provision. The method has been styled the continuous method or "continued accounting" (*comptabilité continue*) by some authors[40] in opposition to the periodical accounting adjustments which other methods propose. It is a complete system of accounting procedure rather than a method of adjustment, correction, or restatement.

2. Four Column Accounting: The Simultaneous Use of Two Columns for Gold Francs and Two for Paper Francs

Before examining the system of four column or "gold franc accounting" (*comptabilité en francs-or*) the system of balance sheet adjustment proposed by the well known French accounting theorist, M. Gabriel Faure, will be described. This system is a hybrid one, possessing some of the characteristics of the balance sheet adjustments outlined above, and some of the features of gold franc accounting of which M. Faure was a fervent proponent. This method provides for the establishment of gold franc balance sheets by the adjustment of accounts expressed in terms of depreciated paper francs.[41] In one of the methods described above the adjustments were made to the balances only of the accounts. Under the proposals of MM. Raffegeau and Lacout, the old and new balances were to be adjusted by the coefficients of exchange for the date at which they were made. According to M. Faure's method the balances of the accounts are not adjusted *en bloc;* the several entries to the account are adjusted separately using the coefficient of exchange for the date at which the entry was made in each case. The difference between the gold and paper values of the items is then carried as a debit or credit, as the case may be, to either the profit and loss account or to the "loss by

[40] Notably by MM. Raffegeau and Lacout, *op. cit.*, p. 106.

[41] Faure, Gabriel, *Bilans et comptes en francs-or*, Paris (Nouvelle Librarie Nationale), 2d. ed., 1926, pp. 49-66.

inflation" (*perte par dévaluation*) account.

This method presents the same advantages as that proposed by MM. Raffegeau and Lacout; that is, it permits the establishment of profit and loss for each financial period. Further, this method is much more accurate than could be any method of periodical balance adjustment. The exact loss, in reality, is not the difference between totals or round sums but the difference between the paper and gold values on the date of the transaction or entry of each item. The question of accuracy, as it relates to balance sheet adjusting can, however, easily be pushed too far. The present author holds no particular brief as to the absolute accuracy of any method of inflation accounting. The accuracy of any of these methods is purely relative. Their use is favored during inflation because they all give a more accurate picture of the true results of business operations than any system of depreciated paper money accounting alone.

The principal objection to the employment of M. Faure's plan lies in two directions: (1) the possible lack of the business records necessary to the translation of each item in the accounts, and (2) the expense entailed by the required calculations. While a well managed business may possess all of the necessary records, the enterprisers may well ask if the added accuracy which this system gives will fully compensate the large expenditure which it would entail, and if less accurate methods, much less costly, are not sufficiently accurate for practical purposes. In a large business the amount of detail work, in both time and money, would probably prove prohibitive. For a small enterprise its employment would be more easily envisaged.

Nevertheless, it may be possible to compromise between the periodical adjustment system and the individual entry system, by making periodical adjustments say each month, or each week. This would provide sufficient accuracy for most purposes and would also prove feasible. The author is inclined to take this position in the matter.

The gold franc accounting method applies similar theory. Here the books are kept in both paper and gold francs. Each entry is made in terms of both gold and paper francs at once. Since all business transactions were carried out in terms of paper francs, it is necessary to carry them to the gold franc columns by using the coefficient of exchange as explained in a previous paragraph. If desired, two separate sets of books could be employed for this method; one set in paper francs and a second set in gold francs. The set in gold francs could eliminate many controlled accounts showing only the controlling accounts and doubtless other simplifications could be introduced without destroying its value or exactitude.

There are three steps involved in gold franc accounting: (1) the evaluation of the past balance sheet in terms of gold francs and the opening of the gold franc books or columns, (2) the technique of bookkeeping under this system, and (3) the closing entries. Each one of the steps will be examined in order.

The evaluation of the balance sheet in terms of gold francs gives rise to no special difficulties but is nevertheless necessary in order to determine the gold value of the amounts outstanding in the accounts before the gold columns or books can be opened.[42] Any one of the methods outlined above can be employed; evidently the method suggested by M. Gabriel Faure is the most accurate, but its cost would perhaps prove prohibitive.[43] Once the gold franc balance sheet is established, it is next necessary to open the gold columns or books by making a set of transfer entries. The balances of the paper franc accounts are naturally left intact. The gold ac-

[42] Cf. Delavelle, Emile, *La comptabilité en francs-or*, Paris (Nouvelle Librarie Nationale), 2d. ed. 1924, pp. 57-63. Evidently for new enterprises beginning business during inflation the books can be opened at once in terms of both paper and gold francs and the evaluation of the balance sheet, therefore, becomes unnecessary. The illustrative examples given by M. Gabriel Faure are of this nature. See his *Bilans et comptes en francs-or*, pp. 25-36.

[43] M. Delavelle apparently uses the first method outlined. Cf. *op. cit.*, pp. 57-62.

counts will show one account which is not present in the paper books—"gold depreciation" or "loss by inflation." To this account are carried, as debits or credits, the differences between the paper and gold balances of each account, as was described in the preceding section.[44]

We are now ready to examine the technique of bookkeeping under this system. According to the example of the working of the system which M. Delavelle gives, the entries to the gold accounts are not made to the controlled accounts when there exists a controlling account (*compte collectif*) and apparently the entries are made to the gold accounts but once a month, at the end of the month.[45] The entries were here made by dividing the paper franc values by the coefficient of dollar exchange at the end of the month for which the entries were made. Naturally only the totals of the month for each type of transaction were entered. For instance, each individual deposit to the bank was not transformed. Only the total of deposits due to a certain type of receipts was so transformed. Thus the payments made by debtors were transformed *en bloc* and not separately.

Under the system proposed by M. Gabriel Faure the entries are made to the gold accounts simultaneously with those made to the paper accounts. For this purpose the coefficient of dollar exchange is used for the date on which the transaction was made.[46] This system has the advantage of greater accuracy, but the disadvantage of somewhat greater expense. However, it would be easy to greatly simplify the gold accounts. Provided a separate set of gold books were kept, it would be possible greatly to effect combinations of separate accounts which are found in the paper franc books. In other words the gold accounts could represent a condensation of the paper accounts. Then, at the end of each day's entries, the adjustments could be made by daily totals to the gold franc books. Both authors journalize their transactions according to the traditional methods.

The closing entries, in addition to the usual entries made at this time, comprise some special entries due to the nature of this system. In M. Delavelle's method a special account "depreciation of the gold capital" (*dépréciation du capital-or*) which naturally is only to be found in the gold accounts is created to which are carried as debits and credits the decrease and increase in the real value of the paper franc balances of the accounts. An example may make this point clear. If there were 100 francs in the cash account on June 30th, and the coefficient of exchange stood at 2, while on July 31st it stood at 4, the depreciation of the gold capital account would be debited with 50 francs, the decline in the value of this amount due to the monetary depreciation.[47] In effect, the purchasing power of 100 francs has declined by 50% as shown by the increase of the coefficient of exchange from 2 to 4. This method resembles that proposed by MM. Raffegeau and Lacout as outlined above. In the example which M. Delavelle gives, the paper franc accounts show a net profit. This profit is closed out to reserve, evidently to prevent the books from showing a fictitiously large profit, or to indicate a conservative financial policy. The gold accounts show a profit also, since the decline in the paper balances has already been adjusted, and this amount is closed out by crediting the depreciation of capital account.

In M. Faure's method the principle is similar but the operations, since the gold entries are made simultaneously with the paper entries, vary. An account "loss by inflation" (*perte par dévaluation*), which

[44] Cf. Delavelle, *op. cit.*, pp. 63.64.

[45] The word "apparently" must be stressed for M. Delavelle is not very explicit on this point. In the illustrative example that he gives the entries to the gold books are made at the end of the month. It is, however, quite possible the M. Delavelle was employing this method for purposes of illustration only and that he would agree to entries to the gold books at the same time that the entries were made to the paper books.

[46] Cf. Faure, *op. cit.*, pp. 25-28, 33-36.

[47] Cf. Delavelle, *op. cit.*, pp. 60-64.

corresponds to M. Delavelle's "depreciation of gold capital account," is debited or credited for the differences between the balance of the gold value of the paper franc accounts and those of the gold franc accounts. Thus in the example shown by M. Faure[48] the cash shows a debit balance of 14,310 in the paper francs account, and a debit balance of 30,986 in the gold francs account. The gold value of the actual paper francs on hand, 14,310, is, according to the coefficient of exchange employed, 5,724. Thus the debit to loss by devaluation for this account is found by subtracting 5,724 gold value of the actual paper francs in cash account from the debit balance of 30,986, or net debit 25,262 gold francs. Hence the gold cash account is credited with 25,262 francs which is carried as a debit to "Loss by Inflation." After these entries have been completed, the paper cash account will show a debit balance of 14,310 and the gold cash account a debit balance of 5,724. This latter figure represents exactly the gold value of the actual cash on hand. This same method is applied to all the accounts where any loss or gain by the devaluation of the franc is apparent. The other closing entries employed by M. Faure are in accord with the principles of usual accounting practice.

The results of the operations, as has already been noted, will be more accurately established by M. Faure's method than by those of M. Delavelle, but on the other hand, they will also prove much more expensive to establish. M. Faure's method possesses another advantage of considerable importance—it affords the possibility of maintaining a set of cost accounts, tied up with the regular set of books, in terms of both paper and gold francs, thus enabling the business manager to determine the gold cost of production at any time and without any further calculation.[49] If the gold cost of production is known the approximate paper cost of replacement or reproduction can be easily determined by multiplying the gold cost by the coefficient of exchange. This would afford a very simple method for the application of the theory of replacement prices, so essential to the life of business enterprises during inflation. While this method does not give the exact cost of replacement, it gives a simple, empirical, method of determining it with approximate accuracy—sufficient accuracy, it is believed, for all practical purposes—and will doubtless enable the enterprise to maintain its working capital intact. The exact cost of replacement can only be determined by a knowledge of the real, or market cost of the materials, salaries, and other expenses at the time that the sale was made. These expenses tend to follow very closely the movement of the exchange rates; as a matter of fact they

[48] *Op. cit.*, pp. 33-38.

[49] In the example given by M. Faure the enterprise does not employ a system of cost accounts. In the analysis of cost which M. Faure appends to his discussion of method—*op. cit.*, pp. 40-46—the enterprise has based its prices upon the cost of acquisition and not the cost of replacement. Therefore the suggestions given in the above paragraph must not be attributed to M. Faure, but to the author of this article who must take full responsibility for it. It is a striking fact in the French literature of inflation—which was very large and generally of an excellent character—that the authors so generally insist upon the use of replacement costs, the correct inflation price basis, but that none of the accountants in their various suggestions for inflation accounting methods indicate any inflation cost accounting methods. Their discussions and their examples all deal with the ordinary books of record and never with the cost books. And yet a good system of costing, properly adjusted to inflation conditions, could be of great aid to the business manager in applying the theory of replacement costs. One is tempted to demand the reason for this hiatus; it is probably due to several causes. In the first place the theory and practice of cost accounting is not nearly as well developed in France, as in the United States. This statement is made after a study of French accounting literature and interviews with French chief accountants, public accounts, and business men. Further, such cost systems as one finds in the larger establishments appear to be the results of chief accountants in the regular employ of the company rather than the work of public or consulting accountants. The French public accountant, while perhaps a better theorist than his American colleague, appears to be in general less a practical accountant and to have had a smaller field of experience. The books and articles on inflation accounting were largely prepared by these public accountants. Had they been the work of chief accountants, it is possible that they would have given more information regarding the procedure to be followed in the case of cost accounts.

show generally a lag when compared to exchange. If the gold costs, therefore, are multiplied by the coefficient of exchange rates a sufficient degree of accuracy should be obtained.[50]

The methods of gold franc accounting outlined in this section have been vigorously attacked and defended and, doubtless, had inflation assumed the proportions that it took in Germany, the question of the advisability of its use would have been threshed out by a study of practical results. We can classify the attacks made upon it into two groups: (1) Attacks by those who favor some kind of special accounting methodology for inflation systems but who prefer the use of another method to that of accounting in gold and paper francs carried out simultaneously and (2) those who feel that ordinary accounting methods are satisfactory during inflation and that all of the inflation systems give false results. We shall here only examine those objections belonging to the first category.

The objections of MM. Raffegeau and Lacout will first be examined. The difficulties with gold franc accounting, according to these authors arises from the incessant variability of the value of the money.[51] The following cash account is used by way of illustration:[52]

Cash Account

Debit

	Coefficient of Conversion	*Paper francs*	*Gold francs*
Old Balance	4	800	200
Receipts	4	400	100
Receipts	3	300	100
Receipts	6	600	100
		2,100	

Credit

	Coefficient of Conversion	*Paper francs*	*Gold francs*
Expenditures	5	500	100
Expenditures	8	800	100
New Balance	8	800	
		2,100	

The entries to the above account were made at different dates when the franc was varying in its gold value as is shown by the column of coefficients of conversion. The new paper franc balance is the same as the old for 1,300 paper francs were received and an equal sum disbursed. Due to the decline of the franc, this balance was worth 200 gold francs at the beginning, while at the end it was worth but 100 francs, for the coefficient has changed from 4 to 8. The balance of the gold accounts, 500 — 200 equals 300 francs. The result of the

[50] The use of the coefficient of exchange rates—preferably Franco-American rates—is here suggested because the paper francs have been reduced to gold values by dividing by the coefficient of exchange. If the paper franc accounts have been reduced by the use of one of the several indices of prices, it will then be necessary to determine replacement prices by multiplying by the same index. One difficulty with the use of indices of prices as means for determining purchasing power lies in the fact that daily "quotations" are not ordinarily available. During inflation the *Statistique Générale de la France* published weekly figures for some of its indices in a supplement to its *Bulletin*. Ordinarily, the indices are established each month. Exchange rates may be had for any day, any hour, or even for a given moment, for they are made on an exchange by buyers and sellers. Thus for purposes of the cost records the use of the coefficient of exchange appears to be the better element. Unfortunately, the question is not as simple as this description might lead one to think. The various levels and movements or rates and the several indices are not the same, and considerable difference will result if one system or another is used. Generally speaking, the level of prices at wholesale was higher than the level of rates of exchange as table 3 shows. The movement of exchange rates, on the other hand, showed a wider scope and prices show, generally, a lag when compared to rates. These considerations must be taken into account when the choice of a coefficient of conversion is made. No definite rule can be laid down here. Each particular enterprise will need to study the movements of its costs and prices and choose a coefficient based upon considerations of this type. It must be noted, as an argument against the use of the coefficient of exchange, that, since the level of this figure is generally below that of wholesale prices, the gold values which result from its use will not bring values down to their pre-war level, but only to their gold level. The other advantages, notably the rapidity of movement of the coefficient as well as the continuous quotations, largely counterbalance this defect.

[51] Raffegeau and Lacout, *op. cit.*, p. 106.

[52] *Op. cit.*, pp. 106-107. In reproducing this account the decimal point has been moved three places to the right in order to simplify the figures. Also, the authors use marks instead of francs.

gold franc columns, showing the balance as worth 300 gold francs, when it in reality is worth but 100 gold francs is, conclude the authors, obviously false.

This criticism is based upon a failure fully to grasp the method criticized. If we close the cash account above, according to M. Faure's method we will debit "Loss by Inflation" with the difference between the gold value of the paper balance, 100, and the gold balance, 300, giving 200. This latter sum represents the loss by devaluation. The difference between this sum and the gold balance, 300, will be 100 francs and represents the new gold balance, an amount which MM. Raffegeau and Lacout recognize as exact. M. Faure, in his reply to these authors, points this out.[53] MM. Raffegeau and Lacout further criticise the method as involving too much work.[54]

A criticism of another order comes from the pen of M. Fernand Leger and, as he states, it applies principally to the method proposed by M. Delavelle.[55] Effectively, this criticism cannot be applied to the method of M. Faure as a careful study of his method will reveal.[56] M. Leger feels that it is an error to charge the "Gold Capital Depreciation" account with the difference between the gold value of the new and old balances of the merchandise account. If the franc has depreciated in the interval of time between the old and new balances this practice will show a loss that the business has not really sustained. Let us assume that on December 1, the business has a stock of merchandise worth 100 paper francs and that the coefficient of exchange is 4. The gold value of this stock is thus 25 francs. Let us assume that on December 31 the stock is still intact—its paper value 100—and that the coefficient of exchange is now 5. Its gold value would thus be now 20. It would be an error to debit the gold capital depreciation account with 5 francs, the difference between the two balances, because the stock of merchandise appreciates at approximately the same rate that the franc depreciates. In other words the paper value of the stock on December 31 would be 125 instead of 100 francs. Using the coefficient 5, the gold value of this stock would be 25 francs just as it was on December 1. The account Merchandise must therefore be treated just as the plant and other fixed assets are treated, for the value of the stock appreciates in terms of paper as the franc declines. This holds true, continues M. Leger, of all accounts representing corporal values (*valeurs corporelles*).

The exactitude of M. Leger's criticism is not to be controverted. However, this is less a criticism of the principle of gold franc accounting than it is the technique of handling certain accounts under one of the gold franc methods. It would be a simple matter to change the technique to correctly adjust these accounts and still apply the basic principles. As a matter of fact, M. Leger himself suggests the method to be followed here although he is not a proponent of the method of gold franc accounting.[57] If the enterprise is basing its selling price upon the cost of acquisition, there will be a fluctuation loss upon the merchandise sold. The amount of this loss can be calculated by subtracting from the cost of replacing the merchandise sold, the price with which the merchandise account was credited when the sale was made. This gives the loss which should be carried to profit and loss as a debit. With this correction, the method of M. Delavelle is correct.

M. Leger also criticises the use—by M. Delavelle and the partisans of his system—of the coefficient of exchange at the end of the fiscal period in evaluating the accounts. He believes that it would be more accurate to use a mean between the coeffi-

[53] Cf. Faure, *op. cit.*, pp. 78-79.

[54] *Op. cit.*, pp. 108-109.

[55] Leger, Fernand, *Le redressement des bilans en francs-papier*, Paris (Editions Experta), 1926, pp. 29-36.

[56] M. Faure, *op. cit.*, pp. 40-44, in his study of the "result of sales" employs a method similar to that suggested by M. Leger in determining the loss on goods sold, and does not fall into the error committed by M. Delavelle.

[57] *Op. cit.*, pp. 35-36.

cient at the beginning of the fiscal period and at the end. This would doubtless be more accurate, but it would not be absolutely so, and would still be less accurate than the method proposed by M. Faure. It must finally be noted that the objections which M. Leger raises against one of the gold accounting methods applies with equal force to the first system of inflation accounting suggested—the preparation of gold-franc balance sheets.[58] This objection is valid, but it does not invalidate the principle of this method any more than it did that of gold franc accounting. It shows a needed change in the technique employed which should not prove, in practice, an insurmountable obstacle.

3. Paper-Franc Accounting with Correcting Accounts

M. Leger's criticism of gold franc balance sheets and gold franc accounting methods led him to reject these two systems in favor of one of his own elaboration; at once exceedingly simple and ingenious, and which constitutes one of the outstanding French contributions to the subject of inflation accounting methods.[59] M. Leger classifies the errors which creep into the accounts during inflation as follows:

1. Insufficient depreciation of the fixed assets.
2. A larger gross profit seems to result than was actually obtained.
3. Loss on the excess of the incorporeal working capital assets over the incorporeal working capital liabilities.

In order to eliminate the errors coming from these three sources, M. Leger proposes three types of accounting adjustments:

A. Depreciation of Fixed Assets

The method proposed by M. Leger is essentially the same as that explained in section 2 of this article. The fixed assets must be depreciated upon their gold value so that the enterprise will have placed in the reserve for depreciation account an amount sufficient to replace the physical assets when their theoretical term of life will be at an end. For this purpose the gold value of these assets is multiplied by the coefficient of the exchange rate and the fixed annual percentage of this amount is charged to the Profit and Loss account and credited to the Reserve for Depreciation account.

B. Re-evaluation of Gross Profits

Taking the following assumed transaction, M. Leger shows how gross profits, as determined by the accounts, may be inaccurate:

Sales (in paper francs)	1,350,000
Cost of goods sold (in paper francs)	1,000,000
Gross profit (paper francs)	350,000

The cost of goods sold represents the actual cost of acquisition. M. Leger then assumes that the franc has depreciated in the interval of time elapsed between the acquisition and the sale of these goods; the coefficient of exchange stood at 4 at the former period and at 5 at the latter. Reduced to gold francs, the statement is as follows:

Sales (gold francs)	270,000
Cost of goods sold (gold francs)	250,000
Gross profit (gold francs)	20,000

The gold franc gross profit of 20,000 francs represents a paper franc profit (with the coefficient at 5) of 100,000 francs instead of 350,000 as shown in the first instance. The paper franc accounting has thus given a misleading result. M. Leger goes on to state that 250,000 francs of the working capital of the enterprise reflect only a paper profit, as the enterpriser will discover when he finds it necessary to renew his stock. If the enterpriser restocks the same quantity of goods sold on the day the sale was made, his new stock will cost 1,250,000 paper francs instead of

[58] *Op. cit.*, pp. 37-38.

[59] Leger, Fernand, *Le redressement des bilans en francs-papier*, Paris (Editions Experta), 1926, pp. 39-48.

1,000,000 paper francs, since the franc has depreciated by 5% since the original purchase.[60]

M. Leger suggests that the situation be handled in this way:[61]

Paper franc price of goods sold		1,350,000
Paper franc purchase price of goods sold	1,000,000	
To reserve account, paper francs	250,000	
Total		1,250,000
Gross paper franc profit		100,000

Thus the difference between the cost of acquisition of the goods sold and their replacement costs is carried as a credit to a reserve account and as a debit to profit and loss. In practice, declares M. Leger, we will not seek out the exact date upon which the goods sold were acquired—this would evidently occasion too much work. The calculations would be made on the ensemble of goods sold during the period, using a mean coefficient for the period under consideration. This mean coefficient would be based upon the period of turnover of the business, and could be calculated in several ways; each enterprise using such a mean as is best adapted to its affairs.

C. Difference Between Working Capital Assets and Liabilities

If a French enterpriser purchases a dollar on a given date for 18 paper francs, the rate of exchange on that date, and if the rate of exchange stands at 20 a year later when the dollar is sold, his books will then show a paper franc profit of 2 francs paper. In reality, however, he has made no profit at all. However, had he set 18 francs aside in his safe deposit box, he would not have been able to purchase the dollar a year later although the books of account would show no loss by reason of this stocking. The purchase of the dollar has simply permitted the business man to avoid a loss. With this remark in mind, M. Leger proceeds with an imaginary example:[62]

Cash and in Banks (paper francs)		300,000
Accounts Receivable (paper francs)	1,000,000	
Total Working Capital Assets (paper francs)	1,300,000	
Accounts Payable (paper francs)		600,000
Net Working Capital (paper francs)		700,000

If this net working capital is represented by paper money—notes of the Bank of France—it will decline in purchasing power as the franc depreciates. Now if, during a certain period, the rate of exchange passes from 20 francs to the dollar to 25 to the dollar, the gold value or the purchasing power of this working capital will then have passed from 175,000 to 140,000, a loss of 35,000 gold francs or 175,000 paper francs.

Another very important consequence indicated by M. Leger, and one which merits attentive study by enterprisers, is the fact that the several reserve accounts are represented by assets of diverse character, some of them in the working capital assets which are subject to a decline in gold value or purchasing power. If these reserve accounts are maintained at their full value, even taking into account the appreciation in paper franc values, they will be nevertheless represented by working capital assets which are declining in real value. *It is thus insufficient to make proper provision for reserves alone; the asset accounts must also maintain their real value, that is, purchasing power, or gold value.*

M. Leger suggests two remedies for this situation.[63] As far as possible all the assets should be invested in corporal values which appreciate in value as the franc de-

[60] $\frac{5}{100} - \frac{4}{100} \times 1{,}000{,}000 = 1{,}250{,}000$. This will give the approximate cost of replacement, but not the exact. The use of the coefficients of exchange to determine replacement costs assumes that the replacement cost moves in exactly the same way as do rates of exchange. This is obviously inexact for all goods except imports of some goods from gold money countries, but it is nevertheless sufficiently exact for the purpose at hand.

[61] Leger, *op. cit.*, pp. 42-43.

[62] *Op. cit.*, pp. 43-46.

[63] *Op. cit.*, p. 46 ff.

clines or in the purchase of securities the price of which rises in the same proportion.[64] For that part of the working capital which cannot be so invested, M. Leger suggests that a reserve be constituted by a debit to profit and loss sufficient to compensate for the decline in the gold value of this element of the working capital. He goes on to state that the various methods used to attain this result might vary. Evidently, each enterprise will need to work out its own formulas and technique.

M. Leger's system is less an accounting procedure than a managerial policy. His proposal makes no fundamental changes in the books of account. These are merely adjusted by the corrections which he has suggested. If these policies were followed by managers—if competition would permit their use—the enterprises would suffer but little from inflation. While the books of account might not present the true situation of the affair as well as M. Faure's gold accounting method, sufficient information would be provided for the management.

M. Leger's proposals do not make any provision for the automatic adjustment of the cost accounts. This will leave the manager the delicate problem of a constant recalculation of replacement cost selling prices. This appears to be the principal objection to the use of this method, which otherwise recommends itself by its economy and simplicity.

4. Paper-Franc Bookkeeping with Restated Paper Franc and Gold Franc Balance Sheets

This group of inflation accounting systems includes two methods: The progressive method (*méthode progressive*) proposed by MM. Raffegeau and Lacout and the "method of heterogeneous accounts" (*méthode des comptes hétérogènes*) or "balance conversion method" (*méthode de conversion des existants*) suggested by M. Gael Fain.

A. The Progressive Method

The principle underlying this method consists in the translation of the old balances of the accounts into their new paper franc values at the end of the financial period.[65] This system does not give a restated balance sheet in terms of gold francs as did the methods previously outlined, but a restated balance sheet in terms of paper francs. The amounts outstanding in the various accounts are brought up to their actual present value, or replacement value. Thus we have a balance sheet in terms of paper francs; the amounts, however, give the approximate present value of the elements represented by the accounts. Two steps are involved in this procedure:

1. The opening balances of the accounts are adjusted on the basis of the value of the monetary unit at the date of these opening entries or, in other words, at the beginning of the financial period. Only those amounts which are undervalued in the accounts are so re-evaluated. The differences in the values which will result from this step are carried as debits and credits to a new account called "Correction of the Opening Balances Evalued in Year X" (*correction du bilan d'entrée valeur annee x*). This account will, in practice, generally receive only credits. The credit balance of this account will then show the paper franc increase in value of the capital and reserves and is closed out to the account "Increment-value of Capital and Reserves" (*Plus-value du capital et des réserves*). It is clear that accounts such as Cash, Accounts Payable, Accounts Receivable, etc., are not adjusted by entries to the Correction of the Opening Balances evalued in year X. These accounts can

[64] M. Leger calls attention to the possibilities of the use of several types of security investments for this purpose. He warns his readers that possible future taxation might bring about variations in the utility of certain securities for this purpose, and that foreign securities have already increased so much in value that it is to be feared that they will decline in value in the future. He appears to prefer the use of the new 4 per cent French *Rentes*, the value of which is to be reimbursed in paper francs adjusted so as to maintain their gold value intact.

[65] Raffegeau and Lacout, *Etablissement des bilans-or*, Paris (Payot), 1926, pp. 76-87.

show no increase in paper franc value by the decline in the purchasing power of the franc. On the other hand, these adjustments will be made to accounts such as Plant, Equipment, Material, Merchandise, Stocks and Bonds, and the like, for the paper franc value of these accounts will change with the purchasing power of the franc.

2. The second step consists in the revaluation of the opening balances of the accounts on the basis of their value at the end of the financial period under consideration instead of at the beginning as was the case in step 1. Here the values of the monetary accounts, not so adjusted in step 1 are also adjusted here, because of the fact that, if their face values have not changed or, in other words, if they show no surplus value by reason of the decline in the franc, their purchasing power has declined nevertheless. The differences which will result from this step are carried as debits and credits to an account called "Correction of the Opening Balances, Evalued in Year Y." This account is, in its turn, closed out to the Increment-value of Capital and Reserves account.

The following Raw Materials account shows the application of these principles:[66]

RAW MATERIALS

Debits

	Paper francs
Opening Balance	900,000
Credit Purchases	4,500,000
Cash Purchases	900,000
Correction of Opening Balance Year X	300,000
Correction of Opening Balance Year Y	1,200,000
	7,800,000

Credits

	Paper francs
Production Account	4,800,000
Profit and Loss	600,000
New Balance	2,400,000
	7,800,000

The value of the opening balance for the year X, the beginning of the financial year under consideration, was 1,200,000 francs, while the books give the opening balance as 900,000. The difference between the two amounts, 300,000 paper francs, represents the increase in the nominal value of this sum due to the depreciation of the franc. The account is therefore credited with 300,000 which is then carried as a debit to the Correction of Opening Balance, Year X account. In the following year, year Y, the end of the financial period under study, the nominal value of the opening balance, instead of 900,000 or 1,200,000 is now 2,100,000. The increase is here due to the depreciation of the franc during the current year. The sum of 1,200,000 is therefore credited to the Raw Materials account and debited to the account Correction of Opening Balance Year Y. Profit and Loss has here been debited with 600,000 francs which represents the difference between the book and replacement value of the new balance. This figure was obtained as follows: The total credits to this account, 7,800,000, less the raw materials charged to Production account, 4,800,000 leaves a nominal balance of 3,000,000 francs. An inventory shows that the material on hand is actually worth but 2,400,000 francs. The difference, then, between the nominal and actual value of the raw material on hand is thus 600,000, which must be charged to the Profit and Loss account, and the Raw Materials account will then show a new balance of 2,400,000 francs. Had the actual value of the raw material on hand been higher than its nominal value, then Profit and Loss would have been credited for the difference between the two values.

The same principles are applied to all the accounts which require these adjustments, and the depreciation and reserves are calculated on the basis of replacement values. No changes are made in the manner of journalizing the entries nor in the ordinary accounting technique save those mentioned above. Since both the Corrections of the Opening Balance, year X and year Y, are closed out to the account "Increment-value of Capital and Reserves,"

[66] *Op. cit.*, pp. 79-80.

the balance sheet will show this account in addition to those found in the usual books. This account will usually, during inflation, show a credit balance, and represents the increase in the nominal value of the Capital Stock and Reserve Accounts. Since this method of accounting adjustment brings the paper franc values shown by the balances of the various accounts up to their present value, or their reproduction value, the credit side of the balance sheet will show a smaller total than the debit side. The difference might be credited to a Surplus account, to a Reserve account, or the values ascribed to capital stock might be increased. Under the method proposed by MM. Raffegeau and Lacout the special account, Increment-value of Capital and Reserves has been created to receive this credit. This appears to constitute conservative accounting practice for, in this way, the changes in the values of the accounts will not be ascribed to any of the usual sources as might be the case if they were credited one of the former accounts. The Profit and Loss account shows not only the results of the business operations for the financial period, but also the gains and losses due to the fluctuation of the franc.

This method is not that which MM. Raffegeau and Lacout prefer and which is the retrograde system with a rectified balance sheet for the previous financial period as outlined in a previous section. The method here presented, however, state the authors, has the advantage of showing the results of the financial period being studied and does not mix these results with those of past periods.[67] They call attention to the fact that this method runs the risk of maintaining the illusion which inflation is apt to create. That is, it shows the net worth of the enterprise in terms of nominal paper francs—it does not deflate values. And since prices are rising, the nominal value of the net worth will appear large to eyes which are not accustomed to the revaluation of paper franc sums in terms of gold francs. The amount of the net worth will *look* larger than it really is because it takes a larger number of depreciated francs to represent it. Translated into terms of gold, the net worth may actually have shrunk.[68]

The method, according to its authors, possesses a second disadvantage. The balance sheets of several financial periods are not directly comparable. Since they are established in paper francs, the value of which was steadily declining, the amounts set opposite the several accounts do not show this depreciation from period to period. Thus the balances for one period may have been established while the coefficient was at 3, the succeeding period may find the franc with a coefficient of 4 or 5.

Some of the objections urged against the methods of balance sheet conversion in the first part of this section also apply to this method. It fails to give much useful data for the costing—the methods of four column gold accounting provides much more usable data. It is also far less accurate than the system proposed by M. Faure. Further, since the adjustments are made to the accounts directly, the books will not show the results of the usual accounting methods; they only show the adjusted results. This, of course, could easily be remedied by drawing up a special set of books to take care of the adjustments. But if this is done it would be almost as easy to establish a simple set of gold accounts. The objections urged by M. Leger concerning the adjustment made to the merchandise account apply to this method since profit and loss is made to support the changes in the value of the merchandise which has not yet been sold. The objec-

[67] *Op. cit.*, p. 86.

[68] *Op. cit.*, pp. 86-87. In the example employed by the authors the paper franc value of the net worth stood at 10,580,000 at the end of the period as compared with an original amount of 4,500,000. This might well lead the enterpriser to conclude that his net worth had increased during inflation. Restated in terms of gold, however, there is a shrinkage of 115,000 gold francs in the value of the net worth. It is for this reason that the authors prefer the use of gold franc to paper franc adjustments.

tion urged by the author of the method, namely, the misleading character of the paper franc statements, constitutes, however, its leading defect.

B. The Method of Heterogeneous Accounts

This method, the proposal of M. Gael Fain, represents a combination of the gold franc balance sheet and the paper franc balance sheet methods and thus avoids one of the difficulties of the method just described—its results are not misleading—and at the same time it gives the business manager more information than either the gold or paper franc balance sheet methods used separately.[69] M. Fain does not claim to be the inventor of this method and states clearly that it was developed by the German professors Mahlberg and Schmalenbach.[70]

In M. Fain's demonstration, three forms of each of the accounts are used. The first gives the accounts as they stand on the books; i.e., in terms of depreciated paper francs without any adjustment. The second form shows the account restated (*rédressée*) in terms of paper francs so as to bring the values up to their cost of replacement. The third form restates the accounts in terms of gold francs. The following Merchandise account, taken from M. Fain's example, illustrates the principles which he employs.[71]

Merchandise as Shown by the Books

Debits

Old Balance, 1924	1,200,000
To Accounts Payable	5,000,000
To Cash	350,000
To Accounts Receivable	22,000
To Profit and Loss, 1925	470,000
	7,042,000

Credits

By Accounts Receivable	5,400,000
By Cash	120,000
By Accounts Payable	22,000
New Balance, 1925	1,500,000
	7,042,000

Merchandise Account Restated in Paper Francs

Debits

Old Balance, 1924	1,200,000
To Accounts Payable	5,000,000
To Cash	350,000
To Accounts Receivable	22,000
To Restatement Account, 1925	514,286
	7,086,286

Credits

By Accounts Receivable	5,400,000
By Cash	120,000
By Accounts Payable	22,000
To Profit and Loss	44,286
New Balance, 1925	1,500,000
	7,086,286

Merchandise Account Restated in Gold Francs

Debits

Old Balance, 1924	1,200,000
To Accounts Payable	5,000,000
To Cash	350,000
To Accounts Receivable	22,000
	6,572,000

Credits

By Accounts Receivable	5,400,000
By Cash	120,000
By Accounts Payable	22,000
To Profit and Loss	730,000
New Balance, 1925	300,000
	6,572,000

The Merchandise Account as shown by the books offers no difficulties. It is merely a reproduction of the account as it stands after the closing entries have been

[69] Fain, Gael, *Comment se défendre contre l'inflation*, a printed lecture in pamphlet form, Paris (Compagnie des Chefs de Comptabilité de la Région Parisienne, 47 rue Cambon), no date, pp. 22-45.

[70] While M. Fain does not cite the names of the works of Professors Schmalenbach and Mahlberg he probably has reference to the following contributions: Mahlberg, W., *Bilanztechnik und Bewertung bei schwankender Wahrung*, Leipzig (Glöckner), 3rd ed. 1923; Schmalenbach, *Goldwertausgleich in der bilanzmässigen Erfolgsrechnung*, Leipzig (Glöckner), 1921; Schmalenbach, *Goldmark bilanz*, Berlin (Springer), 1922.

[71] Fain, G., *Op. cit.*, pp. 27, 40-41. M. Fain states that he employs the general merchandise account, criticised by modern accounting technique, only for reasons of simplicity. On the credit side of this account there appears an item "To Accounts Payable, 22,000," while on the debit side there is the item, "By Accounts Receivable, 22,000." These entries refer to merchandise purchased by the customers of the firm and subsequently returned for credit in the first instance, and in the second, to purchases made by the firm and returned to its furnishers for credit.

made. The Merchandise Account Restated in Paper Francs has been adjusted to take care of the fluctuations of the franc. The new balance, 1,500,000 francs, shows the same amount as was the case in the former statement of this account. No adjustment need here be made, for this amount is the result of an inventory in which the actual stock on hand was evaluated at its replacement value. The evaluation of the stock on hand at its replacement cost in the first instance, that is, in the account as is shown by the Books, will bring this account to show a larger profit or smaller loss than would have been the case had the account shown the stock at its cost of acquisition. This constitutes doubtful accounting practice, for the Profit and Loss account is credited with an amount which has not yet been fully earned or lost, and will not be earned or lost until the total final stock has been sold, perhaps not even then. It would, therefore, have been better practice to evaluate this stock in the first instance at its cost of acquisition and then make the adjustment to its cost of replacement in the paper franc restatement of the account. This latter method is followed by M. Fain in his arrangement of the other accounts which require a re-evaluation of balances.

In the paper franc restatement of this account the old balance, 1,200,000 francs shows an inflation increase of 514,286 francs. This figure has been obtained by multiplying the original amount 1,200,000 by the coefficient of exchange 5 giving 6,000,000, which amount is in turn divided by the coefficient 3.5 giving 1,714,286 from which the original amount, 1,200,000 was then subtracted, leaving the amount, 514,286, which is credited to the Restatement Account, 1925. The coefficient 3.5 represented the value of the franc at the beginning of the financial period and the coefficient 5 at the end. Thus M. Fain has multiplied the value of the opening stock of merchandise by the value of the franc at the close of the financial period and has then in turn divided this result by the value of the franc at the beginning of the period. It must be noted that the opening stock of merchandise stood on the books in all probability—although M. Fain is not explicit on this point—at its cost of acquisition. This calculation gives us the figure of 1,714,286 francs for the re-evaluation of the stock of merchandise. This practice would doubtless fall under the criticism made by M. Leger regarding the re-evaluation of the Merchandise Account, and which has already been discussed.[72] The closing balance adjustment to the Merchandise Account has already been made. The method employed by M. Fain, while not absolutely exact in its details, gives a sufficiently accurate global result for practical purposes.

The same principles are applied to all the other accounts which are in need of re-evaluation. The fixed asset accounts have been re-evaluated by using two Restatement Accounts, 1924 and 1925, respectively. To the first is credited the difference between the book and replacement value of the asset on January 1, 1925. The second is credited with the difference between the value of the asset on January 1, 1925 and December 31, 1925. Both of these accounts, probably for the sake of convenience, have been closed out to a general Restatement Account. The closing balances give a figure representing the paper franc replacement cost and are adjusted by entries to profit and loss. The following accounts, and in practice all accounts of a similar character, are adjusted in the same way that the merchandise account was handled: Cash, Accounts Receivable and Payable, and Bank. Since the object of this system is to give a re-evaluated balance sheet in terms of paper francs it is necessary to "restate" the value of the capital stock and reserves. This is done through the creation of a "Restatement of Capital" Account (*Redressement du capital*). This account is credited with the difference between the book value of the capital stock, which in this case was 2,000,000

[72] Cf. Leger, F., *Le redressement des bilans en francs-papier*, Paris (Editions Experta), 1926, pp. 30-36.

francs and the present paper franc value of the capital stock. M. Fain appears to assume that the enterprise was created before the inflation and that therefore this figure, 2,000,000, represents the capital in terms of gold, although this is not explicitly stated. The capital is then brought to its theoretical paper value by multiplying by the coefficient 5 giving a total paper value of 10,000,000. From this amount is subtracted the sum at which the capital stock is carried on the books, 2,000,000, giving a net difference of 8,000,000 paper francs. This amount is carried as a credit to the Restatement of Capital account and as a debit to the general Restatement account. The final paper franc balance sheet will thus show—generally speaking during inflation—an account, Restatement, with a debit balance, an account, Restatement of Capital, with a credit balance and a Profit and Loss account with a credit balance. This latter account has been debited for the profit and loss entries to the several accounts, in the present example, as follows: Debits: plant, equipment, furnishings, merchandise, accounts receivable, cash, bank, stocks and bonds, general overhead expenses; Credits: mortgage, bonds, accounts payable. The Profit and Loss account thus shows not only the results of the business operations during the period, but also the profits and losses due to the fluctuations of the franc for the period under consideration. The Restatement Account shows the profits and losses accruing to the business on account of monetary fluctuations of the past, with the exception of those changes in the theoretical value of the capital stock.

The restatement of the accounts in terms of gold francs offers little difficulty for the principles here applied have already been discussed. The Merchandise Account Restated in Gold Francs illustrates these principles. The new balance has been revaluated at 300,000 gold francs by taking the paper franc balance of 1,500,000 francs and dividing by the coefficient of exchange at the date of closing the books and which stood at 5. The other amounts in the account were left intact with the exception of profit and loss which was here debited for the result of the following equation: (the book value of the merchandise on hand at the close of the period in paper francs minus its value in terms of gold) minus the original amount of the unadjusted account debited to profit and loss or, in figures (1,500,000—300,000)—470,000 equals 730,000. This same procedure is followed for all the accounts where an adjustment is found necessary.

Thus the method of gold franc restatement carries no accounts that the books did not originally show. The Profit and Loss Account shows not only the results of the fluctuations of the franc but also those of the normal business operations as well. However, this account groups in one lump sum the results of all the financial periods, whereas with the use of the Restatement Account the results of previous years are separated from that of the one under consideration. M. Fain declares that it would be possible to use a Restatement Account in connection with the gold franc adjustment and thus attain a similar result.[73] The results of both the paper and gold franc adjustments are the same, save that the one is expressed in terms of paper and the other in terms of gold. The objections made by M. Leger concerning the adjustment of the merchandise account evidently apply to the method here described.

M. Fain feels that his results are exact. He declares, however, that the results would have been different had he employed index numbers of wholesale prices instead of coefficients of exchange as the medium of conversion.[74] M. Fain goes on to suggest that a greater degree of exactitude could be obtained by adjusting the accounts each month instead of each year as was done in the example cited. Further, the Profit and Loss account, he states, does not give us very much information about the detailed results of the operations of the business;

[73] Fain, G., *op cit.*, p. 43.
[74] *Op. cit.*, p. 45.

that is, the profits and losses upon certain specific transactions or upon a certain type of transaction. Further, if the total result of this account is exact, each of the elements, taken separately, is false, for the operations which tend to compensate themselves have not been separately adjusted. We cannot therefore attribute to any one transaction its proper share of profit and loss. It is quite useful to know these detailed results. These can be obtained, according to M. Fain, by a more frequent, say a monthly, adjustment, or by a more frequent adjustment of certain accounts which are of particular importance.[75]

M. Fain's method has the advantage of presenting the results of both the paper and gold franc balance sheet adjustment methods and thus gives the enterpriser more information than will either method taken singly. While his method is more accurate than some which were proposed and which have already been discussed, it is less so than the gold franc accounting system proposed by M. Faure. On the other hand, it is relatively inexpensive and easy to use. It has the disadvantage signalled by M. Leger in the adjustment of the Merchandise Account. The practice of re-evaluating the closing entry in the unadjusted accounts has already been criticised. The defects which are apparent in M. Fain's method can easily be eliminated, and so corrected the method should prove useful.

5. Paper and Gold Franc Bookkeeping with a Regulating and Compensating Account

It is impossible, in an article of this length, to give anything approaching a complete description of this method, the proposal of M. Lucien Thomas. This section will, therefore, be limited to a discussion of the principles involved in this method and to a brief outline of the procedure followed.[76]

There are two parts or phases to this system: (1) The use of a gold standard money of account (*monnaie de compte a étalon or*), and (2) The use of a regulating and compensating account for the determination of the capital at any time.

The gold standard money which M. Thomas employs—he suggests that any fixed quantity of gold would suit the purpose—is the gold franc as defined by the law passed during the first French Republic, and which, up to the monetary revision of 1929, constituted the French official standard. This is a 20 franc gold piece, 9/10 fine, each piece containing 1/155th of a kilogramme of fine gold. One franc, therefore, will contain 0.290325 grammes of fine gold, and constitutes M. Thomas' standard money of account.

The regulating and compensating account preconized by M. Thomas is destined to correct the accounts for the fluctuations in prices occasioned by the depreciation, *or the appreciation*, of the franc. This account is likened to a clockwork pendulum which is designed to prevent the changes in temperature from effecting variations in the clockwork movement. This account will take, as debits the amounts set aside to compensate the losses due to the following elements, among others:[77]

1. Losses on account of cash on hand and in banks, accounts receivable, and other sums owed the firm.

2. The insufficiency of the depreciation reserve for the fixed assets.

3. The amounts resulting from an insufficient determination of the cost price of goods sold.

4. Complementary losses, determined at

[75] *Loc. cit.*

[76] Thomas, Lucien, *La tenue des comptabilités en période d'instabilité monétaire*, Paris (Editions Experta, 71 rue Desnouettes), 1927. This work, by reason of the ideas which it embodies as well as the detailed description of the method advocated and the discussions of principle, constitutes one of the outstanding French contributions to the subject of inflation accounting. Its length precludes any attempt here to set forth more than the briefest characterization of the system which it proposes. It consists of 209 quarto format, double column, pages printed in small type. Most of the works already cited give but 20 to 30 pages to the description of the procedure advocated.

[77] *Op. cit.*, p. 37.

an ulterior date, over the losses ascribed to an anterior period.

This account will take, as credits, amounts set aside to compensate for the following elements, notably:[78]

1. The excessive depreciation reserve for fixed assets.

2. The amounts resulting from an excesive determination of the cost prices of goods sold.

3. Complementary profits, determined at an ulterior date, over the profits ascribed to an anterior period.

The object of this account is to maintain the capital of the business intact no matter what fluctuations the paper franc may show, nor at what period the business was constituted. The system may be said to be of universal application for periods of monetary variation—all possible fluctuations in prices can be handled by the regular procedure which it institutes. This account is so handled that the detailed loss or gain from all the various sources is kept separate. Thus the loss or gain in accounts receivable, cash, investments, etc., are separated in this account and not grouped together in a total result. This is obtained by maintaining a journal for the regulating and compensating account and appropriate subsidiary regulating and compensating accounts to take care of the detailed adjustments.

This system provides for accounts having separate entries for paper francs and gold francs, similar to the method of four column gold franc accounting. The regulating and compensating account is also kept in both gold and paper francs. Thus the paper franc records of the business will present the results of the transactions and adjustments in terms of the only legal money (the paper franc) while the gold franc records will reduce these transactions to their gold value and provide for the various adjustments necessitated by the monetary fluctuations. This dual system presents the great advantage of maintaining intact the paper franc records, and at the same time providing for such readjustments as the management of the enterprise may deem necessary.

In order to gain the maximum degree of precision with a minimum of complication in the actual task of bookkeeping, the system provides for the following procedure:[79]

1. The use of only paper francs for subsidiary journals (*journaux divisionnaires*) and for individual accounts with third parties, as this is the only legal money of contract.

2. If numerous transactions involve the use of foreign monies, separate subsidiary journals will be opened for these transactions expressed in the money of contract. Separate individual accounts with third parties will also be kept, for these transactions, in terms of the money of contract.

3. The subsidiary journals will be centralized periodically in the general journal by means of global conversions of total amounts from paper to gold franc expressions and from foreign monies into paper and gold francs.

4. The general and controlling accounts will be kept in both gold and paper francs.

5. In the absence of a perpetual inventory (*inventaire permanent*), the determination at inventory time of the cost price of the merchandise sold.

6. Monthly adjusting entries for the determination and recording of the gains or losses due to monetary variations on cash, accounts payable and receivable.

7. In the presence of a perpetual inventory, the use of gold francs exclusively for the individual accounts of materials and stock.

8. If a cost accounting system is used, the determination of the costs in terms of gold francs.

The length of the adjustment periods referred to above will depend upon the amplitude of the price fluctuations. The gold value of the paper franc is determined by the use of the coefficient of Franco-American exchange rates. The average rate for the period under study is used for this de-

[78] *Loc. cit.*

[79] *Op. cit.*, pp. 38-39.

termination. M. Thomas recognizes, however, that the determination of the average rate best adapted for certain types of enterprise is a delicate calculation, and states that no absolute precision in this matter is possible.

The reason may well demand at this point the question: What use is made of the Regulating and Compensating Account in the closing entries? Unfortunately, no single answer can be made to this question. An exact idea of the use of this account can only be obtained by a detailed examination of the examples which M. Thomas gives and which are far too numerous to permit of analysis here.

This account does not appear on either the paper or gold final balance sheets. The paper balance sheet shows an account, "Reserve for Inflation" (*Provision Régulatrice et Compensatrice*), created by a debit to Profit and Loss, and which shows a sum equal to the Regulating and Compensating Account. This entry is made in view of the legal requirements which regard a gold franc as always the equal of a paper franc and which do not recognize profits and losses arising from the fluctuations of the franc. In the gold accounts, this account is closed out by entries to the several accounts which show the effects of the fluctuation—each account receiving an adjustment corresponding to its change in value to fluctuation. These changes are brought to the Profit and Loss Account through the employment of a special account "Surplus and Deficits" (*Bonis et Déficits*) for the purpose. The value of M. Thomas' elaboration would have been greatly increased by a more complete statement of the principles governing the use of the Regulating and Compensating Account and of a brief résumé of the procedure to be followed in its employment.

One of the more important advantages of this system lies in the fact that it permits the accounts directly to separate the results of the business operations from the losses and gains due to monetary fluctuations. The books of account here show in detail the results imputable to the various operations of the firm as well as those due to the monetary changes. The system furnishes the enterpriser with a large fund of information for his task of business management and thus constitutes an excellent means of business control.[80] A second advantage, of hardly less importance, is that it permits the accountant, at any time, to furnish the managers with cost data in terms of gold francs thus enabling the latter to apply the theory of replacement prices wherever competition permits this. A third advantage of this system lies in the method of determination of the results of the business operations. The element, cost of goods sold, is cast both in terms of replacement and acquisition cost. This is, as we have seen, the proper procedure under inflation. Were this element expressed only in terms of cost of acquisition, the profit and loss could not be determined in both bases.

The description provided by M. Thomas takes into consideration many elements which have escaped the attention of the other authors cited, or which these other authors have felt best to leave to the initiative of the accountants who propose to adopt their systems. The one disadvantage of the system lies in the fact that, being so complete, it may prove too expensive to employ or its use may involve too much added effort on the part of the accounting department. There is always the question of the balance between great precision of results and the cost of exactitude. While M. Thomas' system is well adapted to any long and severe period of inflation, other systems might prove satisfactory for shorter and less severe periods.

IV. Conclusions

Although French inflation was of long duration and fairly severe in its results, the only inflation system used to any extent in France was the establishment of gold franc balance sheets without any changes made either to the entries in, or to the

[80] Cf. *op. cit.*, especially pp. 163-173.

balances of, the ordinary paper franc accounts. The reason why no more complicated plan was followed is to be found in part in the fact that many French business men were not well aware of the nature and effects of monetary inflation. Others failed to understand the principles underlying the more complicated systems of accounting and failed to appreciate their utility or feared that the use of any of these methods would falsify the standard accounting results.

Further, the systems of inflation accounting adjustment, it must be carefully noted, were not universally accepted even by those who understood the nature and effects of inflation.[81] Many thought their results false or at least misleading. Others felt that it was necessary to preserve the accounts intact, free from any inflation adjustments, for they constitute records of far too great importance for any "tampering"; although it must be noted that in the inflation accounting systems, where separate records are kept for adjusted accounts, this objection cannot apply.

One must not expect too much from even the best system of accounts. After all it is not the task of the accounts to furnish ready-made policy for the conduct of business enterprises. This is, and must remain, the task of the business manager or enterpriser. The accounts furnish some of the fundamental data for the determination of business policy, but they cannot furnish all of the necessary elements; they must be supplemented by much additional data and by the intelligence and business acumen of our industrial, commercial, and financial chiefs. And intelligence is sorely needed by the manager in times of monetary inflation, just as it is—as many American enterprisers are at present learning—in periods of deflation.

But even if inflation accounting methods cannot undertake the whole responsibility for correcting and adjusting the evils of inflation, they can furnish the business man with much useful information and help to dispel some of the financial illusions which may arise in such times. This is the fundamental reason for their use, and it is to be deplored that the French business man did not make a ledger for them in his system of accounts.

The elaboration of these systems by both French and German accounting theorists constitutes a definite contribution to general accounting theory. An understanding of the principles involved may help in settling some of the controverted questions of principle which attract the attention of accountants to-day. The study of inflation accounting methods further emphasizes the necessity, which thoughtful accountants feel, of some knowledge of economics; especially of economic theory and monetary theory and history. It further shows that the economist has much to learn from the results of accounting. Analyses of accounting results will do much towards lending precision to, to say nothing of correcting the errors of, the classical economist's theory of inflation.

While we are not now in a period of monetary inflation, recurrent periods of that sort are not unknown in our history. It may be possible that at some time in the future we will again pass through such a period. During and after the world war we knew a period of "gold inflation" accompanied by rapidly rising prices. Can we say that our accounts properly interpreted business operations during the period? The archives of American accounting knowledge must be completed by an outline, at least, of inflation practice, so that we will be prepared for any such situation should one arise in the future. And, in closing, it may be well to remember —especially in view of the status of business in America to-day—that the various methods outlined are also adaptable to periods of deflation—periods of severe falling prices. The underlying principles are the same; the methods of application will vary according to the circumstances.

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[81] Cf. especially, Sabatier, Charles-Marie, *La Mésure des affaires*, Paris (Sirey), 1927.

A COST APPROACH TO ELEMENTARY BOOKKEEPING

A. C. Littleton

"All manufacturing operations have for their main features one characteristic in common, namely, a series of expenditures of cash, merged and sunk in various ways according to the nature of the transactions, followed later on by its reappearance in the shape of a series of receipts. . . ."

J. Slater Lewis (1896)

At various times during the long evolution of bookkeeping, the teaching process has made use of several methods of approach. The early text books followed what has come to be called the "journal approach." Here the student learned almost at once to journalize transactions; usually the basis of his analysis was in simple rules of thumb, such as, "debit what is received; credit what is given." Or he was given long lists of typical transactions rendered into debits and credits for his guidance by the author, but without much explanation of the mental processes involved. The teaching of bookkeeping for a long time consisted in merely leading the student in the footsteps, as it were, of a bookkeeper and showing him the sequence of the latter's actual operations. Teaching was little more than a pedagogy of precept and example.

Later, perhaps by the middle of the nineteenth century, more attention was directed to ledger accounts as a preliminary to analyzing transactions into debits and credits. This was the method wherein the purpose of the usual accounts, and their plus and minus characteristics, formed the ground work of instruction. When the student had learned about the "classes" (i.e., accounts) into which he was to sort the debit and credit elements of his transactions, he was considered ready to follow in the entry-making footsteps of the practicing bookkeeper. This was the "ledger approach."

Still later, very likely about the second decade of the twentieth century, a "balance-sheet approach" received attention.[1] Here the first explanations to the beginner were pushed still further back of the merely practical entry-making sequence of bookkeeping operations. It was considered an inadequate introduction to begin with the explanation of individual accounts. The purpose and usefulness of accounting was first outlined, and the relation of simple financial statements to management was explained. With this foundation established, transactions could be viewed as incidents which altered in varying degrees the whole "set-up" of the business. On this basis, also, ledger accounts could be treated as convenient technical devices for collecting together the "changes" which transactions produced in original financial statements. From this it followed that journalizing was taught as a process of arranging statement-changing facts to secure a ready classification in the ledger.

Obviously this approach was pedagogically very different from the earlier ones; its principal characteristic lay in its complete reversal, for introductory teaching, of the sequence of presenting bookkeeping elements to the learner. It began with the end-result of bookkeeping and worked backward, thus emphasizing purpose first of all, and reaching traditional methodology only after a need for a "procedure" had been developed. Naturally, this approach necessitated a longer introduction to, or preparation for, the art of entry-making; but entry-making followed in due course, at which time the bookkeeper's

[1] The balance-sheet approach is very likely an outgrowth of the equation presentation of bookkeeping fundamentals so widely used in bookkeeping texts and so well organized by Charles E. Sprague in 1880 and 1907.

sequence of recording operations was studied and practiced.

Even before all parties concerned are agreed as to the relative merits of the existing methods, comes the suggestion, as indicated in the title of the present discussion, that still another method of approach is possible.

Undoubtedly it sounds bizarre to suggest starting bookkeeping students with an aspect of the subject which in most current curricula is at least the third course in sequence. But there is this issue involved: whether logic or tradition is best suited to guide the methods of introducing elementary bookkeeping.

All of bookkeeping's history, practically down to our own generation, has been associated with mercantile business—with buying completed articles and selling them at an advance in price. The objective of business was to make a profit by buying in one place where there was plenty and selling where there was less, or by buying in time of plenty and holding until a time of shortage. In a simple economy—one with easily designated units of goods generally sold in wholesale quantities—bookkeeping could be embraced in simple records which showed credit transactions clearly, and which calculated losses or gains for definite lots of goods. This framework still encloses mercantile bookkeeping in spite of the tremendous increase in the volume of business, the variety of articles dealt in, and the severity of competition.

The result is that the modern bookkeeping requirements are becoming increasingly complex within a framework of a methodology which was much more adequate years ago. Students of elementary bookkeeping feel the consequent difficulties, although they do not understand them. After considerable effort they manage to learn—against perfectly natural impulses to the contrary—that expense is not an asset, and that inventory is not an expense although it consists of purchased goods which, in a purchases account, are treated like expenses; they overcome, in the end, their intuitive resistance to the illogic of describing salesmen's salary as "losses" (i.e., deductions from proprietorship); they feel with a good deal of reason that salesmen perform a valuable service which is in nowise a loss. Every one would be happier if bookkeeping could be learned more "smoothly," if progress meant step by step advance upon what had gone before. Nothing is more demoralizing to a student's mental growth in a subject than to meet something of which he is told: "do it just like it is done there; you will understand it some day."

What is proposed in this discussion is merely that we pause to take a fresh point of view under the influence of modern conditions—that we put away for the moment the impulse to accept without question the traditional point of view.

In its simplest terms, what is bookkeeping? If the basic characteristic of earlier business was *exchange*, it would seem proper to designate the basic characteristic of modern business as *conversion*. And as earlier bookkeeping was called upon principally to record exchanges, present day bookkeeping is required to trace out the conversions which take place between the original investment of property in a business and its final disappearance in one form or another from the enterprise.

Does this have any suggestion in it for an approach to elementary bookkeeping instruction? Will a more logical sequence of bookkeeping elements appear if conversion rather than exchange, if manufacturing rather than merchandising, be adopted as the focus of bookkeeping processes? Without attempting an answer at this time, but rather in the hope of drawing forth other opinions, the following pages offer a tentative outline of a possible sequence of topics for an approach on this basis.

First is the suggestion that bookkeeping be presented to the student as a record-making device. The problem of the student is to learn to keep records of business transactions in a peculiar way. Show, therefore, that the first peculiarity of keeping busi-

ness records lies in the "classification purpose" of the records.

The main accounts of a very simple factory business may be explained as "pigeon holes" of classification. (Note that this is a ledger approach rather than a balance sheet approach.) Show why the factory manager wants this kind of classified information, and study each account separately in this connection. Do not use a "sales" account. Explain factory expense as a production "outlay" similar to labor or material, rather than as a "temporary deduction from proprietorship." Show liability and capital accounts as "sources of capital," and asset accounts as "kinds of capital."

The second peculiarity of keeping business records lies in the columnar separation of the increase and decrease side in each account. This actually doubles the number of classes into which data are sorted. The possible use of separate accounts, such as cash received, cash disbursed, labor bought, labor consumed, capital invested and capital withdrawn should be considered. At this time, systematize the plus and minus of the accounts already described. If desired, a discussion of the problems of recording "labor bought" and "labor consumed," etc., in separate accounts might precede the use of the usual double column ledger account. Thus the usual form of account would become a *combining* of two related elements.

The third peculiarity in this special way of recording business facts has to do with the economy of language through the use of abbreviations such as Dr. and Cr.

(1) As an adjective, "debit" means left side; "credit" means right side.

(2) As a verb, "to debit" means to place in the left side of an account; "to credit" means to place in the right side of an account.

(3) As a noun, "a debit" means an item which should be placed in the left side; "a credit" means an item which should be placed in the right side.

The application of these terms to the plus and minus sides of accounts and transaction analysis, and in entering transactions directly in ledger accounts should be required in problem material. Systematize transaction analyses into definite mental operations: asking what accounts are affected; which side of the account is affected; and what are the results in terms of debit and credit (left and right). The inevitable equality of the two aspects of every transaction when fully considered should be emphasized. Explain the acquisition of labor, materials, and factory-expense services, on the same basis, i.e., as assets (investments) awaiting conversion into product.

We enter at this point upon a totally unorthodox phase, namely, the break-down of each sale as it is made into its constituent elements. (This replaces the usual sales account.) For example, a sale of manufactured product then would represent: a debit to customer and credits to labor, material, factory-expense services, and proprietorship (for the profit). The origin of the amounts with which to make the entry may here be explained as being merely from shop records which are not now under consideration.[2] A sale is a transfer to a customer of a part of all of the values we have previously acquired; the balances of the operating accounts (labor, material, expense-service, etc.) are merely value-balances awaiting similar transfer as the services represented are consumed. Simple balance sheets should be discussed in this light; note that "financial" accounts like Notes Payable offer some complications here, and keep these at a minimum.

Introduce transactions involving the proprietorship, e.g., proprietor's salary; the capital account will then be debited direct. When the student is sufficiently advanced in the subject it becomes advisable to treat such withdrawals as an advance drawing of future profits rather than

[2] The point is not to try to teach "cost finding" as such, but rather to make use of the simple logic of the interrelation of the main accounts of factory bookkeeping, thus avoiding the presentation of too many new things to the beginner at one time.

as a reduction of capital; a "profit and loss" account will then be debited. Similarly, treat entries previously credited to the capital account as credits to "profit and loss." The nature of profit and loss as a summary account should be explained.

Discuss "general expense-services" in contrast with "factory expense-services." Illustrate the subdivision of the former into "selling expense" and "administrative expense." Show that these expenditures are "investments in services" in much the same way that productive labor is. In making sales entries at this time show also a credit to selling and administrative expense as indicating a *recovery* of a part of these "investments" along with a recovery of the part of the investment in material, labor, and factory expense.

After an intensive drill in these matters, introduce a variation of the previous methods of entry. That is, sales entries now are to be made in two parts: (a) debit customer and credit sales. (b) debit cost of sales and credit labor, credit materials, and credit factory expense. As a method of finding profit *in total*, practice closing costs of sales and sales directly to profit and loss account without journal entry. Include the profit and loss account and the old fashioned *balance account* in the ledger. This is to be the basis later on of the financial statements.[8]

[8] Up to this point the student has been introduced to a minimum of technicalities. The plan uses factory accounts because there is a natural relationship or flow of values between them. It is easy to get the student to understand the technique of inter-account transfers by using accounts like these which lead to natural summaries. This will pave the way for later teaching the technical method of closing. By using the profit and loss account and the balance account the way is prepared for a later introduction of financial statements. By keeping books of original entry out of the picture the procedure is very much simplified for the beginner. Journalizing, closing, etc., are nothing more than economies in making records after we understand what we are trying to accomplish; they are not an aid in *understanding* the essential procedure of classifying debits and credits or an aid in making the classified records reflect the actual conversions in a quasi-statistical manner. This understanding of account-function should precede bookkeeping methodology.

At this time the finished goods account should be introduced. Consider the problem of what to transfer to the debit of this account in order to record the actual conversions of material, labor, and services into finished product. Should we credit a portion of selling and administrative expense and the proprietor's withdarwals, and transfer these also to finished goods? This gives the opportunity to discuss the basic philosophy of cost of production as "the proper inventoriable value," and the necessity for a separate treatment of non-factory expense as well as profit withdrawals.

Selling and administrative expenses having been distinguished from production costs; the next step is to show the treatment of the former. By means of problems, practice closing the accounts through new summary accounts (i.e., a "manufacturing" account and a "distribution and management" account. This prepares the way for the later introduction of the manufacturing statement and the trading and profit and loss statement.)

At this time abandon direct ledger entries and introduce the journal as a merely convenient record of the debits and credits resulting from transaction analyses. Use for the most part previous exercises so that there will be no new problems of analysis at this time, except, perhaps, the problems of framing journal entries in proper form and of posting them with care.

This study should be based on simple process-manufacturing requiring periodical transfers of values according to quantity. Amounts should be even; there must be no problem of unabsorbed balances. Inventories will readily be recognized as the balances of the accounts.

After adequate practice with the simple records of process costing, introduce job costs. Only a few ledger accounts should be used, one for each job. Use this type of problem to illustrate the makeup of the cost of sales.

Separate statements should now be made using the data in the summary-ledger ac-

counts. In connection with manufacturing statements show how to break down the cost of production by reference to the job-cost accounts or to the credit side of the manufacturing costs accounts; take the trading and profit-and-loss-statements from the profit-and-loss-account and the balance sheets from the balance-account. Show that a physical count of materials on hand, Finshed Goods Inventory, and Cash acts as a "test" of the ledger record. This prepares the way for understanding the nature of inventory in mercantile accounting where the cost of goods sold will have to be determined in the reverse order.

Separate the cash, sales and purchases, into separate books. Teach the journal entry nature of the subsidiary books and the economy of total posting without journal entry.[4]

Following this introductory work, take up mercantile business. Begin with discussions of the difference between mercantile and productive activities; show that in mercantile operations the cost of the goods purchased is determined from invoices, that labor, material, and factory-expense-services (also selling and administrative expenses, and profit of the manufacturer) are included in the purchase price to the merchant.

Consider at length the differences this situation makes in the ledger accounts of the merchant, and in his problem of accounting. The relative impossibility of computing the individual cost of the innumerable sales made in a merchandising business should be stressed. Thus, the logic of a physical inventory-count deducted from purchases (as a remainder) in arriving at the cost of the goods sold is made clear. By working this out in the ledger accounts directly, it becomes obvious that inventory is that portion of purchases which is not included in cost of goods sold. By keeping the inventory as a balance, the nature of the account is kept identical with the materials account, the cash account, etc., with which the student is familiar, and which is subsequently carried forward into the next period.

The introduction of additional accounts (and additional books of original entry, if desired) should be gradual. Practice in preparing simple statements from a trial balance and supplementary data should be given the student. The addition of material to occupy the second quarter or semester will not be difficult because future development of the subject is quite ordinary.

As a result of this introduction, the student with only a year's training will have a basic knowledge which will be valuable whether he continues his study of accounting or not.

I would confidently expect a distinct gain in "teachability" to appear from this approach, growing first, out of its logical development, and, second, out of the thorough drilling in the thoughtful analysis of transactions, which is enforced by withholding the journal for some time. The things sought are simple: (1) an understanding of the logic of bookkeeping reasoning; (2) an acquaintance with the peculiar way of recording financial facts; and (3) the peculiar way of reflecting changes in physical production by corresponding figure-adjustments in the record (i.e., internal transfers between accounts, closing, etc.).

In these few, and, to the experienced bookkeeper, simple things, lies the mystery of double entry bookkeeping. Our main task as teachers, then, is to get these things over to the beginner regardless of the way bookkeeping was first practiced in the Middle Ages, and regardless (in the first part of the course) of the sequence now followed by the commercial bookkeeper in actual business. The task is not one of teaching *procedure*, but of teaching *a way of thinking* about business transactions.

[4] Here—or before separating the books of original entry—may be a good place to make a break in the course, possibly a natural place to end the first quarter or semester. Add reviews and short-set problems. The basic processes have been established; the emphasis has been on conversions of property and transfers thereof to customers.

THE NEED FOR ACCOUNTING IN THE LAW SCHOOL CURRICULUM

HAZEN W. KENDRICK

THE NEED FOR a thing springs primarily from a desire for improvement. With this thought in mind this paper is intended to present the need for the inclusion of a course on accounting in the Curriculum of Law Schools, and at the same time to point out a constructive way to meet that need.

Just as surely as the accountant needs to understand certain fundamental principles of law so does the lawyer need a knowledge of the principles of accounting. With such mutual enlightenment these two professions could be brought into closer relationship through a realization of the service each could be to the other. Professor Himmelblau, in an article[1] entitled "Some Corporate Problems Created by Income Tax Laws," has pointed conclusively the need for an understanding of Corporate problems by the lawyer. It is evident that without some knowledge of accounting a lawyer cannot grasp adequately the problem confronting him, nor can he render satisfactory counsel to the corporation engaging his services.

Any law firm which has a large amount of corporation practice, which handles trust funds, probates wills, etc., needs an efficient accounting system in its own office in order to care adequately for the many transactions it undertakes.

From my experience I have learned that little stress can be laid on the principles of bookkeeping in teaching professional courses, but enough can be presented to convey the fundamental principles of account construction and accounting practices to aid him in the analysis of financial matters.

It is important that in the legal-accounting course the student be taught the meaning of concepts mutually important to both professions. Income profits, earnings, expense, depreciation, appreciation, goodwill, capital and captital stock are significant terms both to the lawyer and to the accountant. Equally important are the problems of realized and unrealized profits, dividend availability and capital losses; surplus and appropriation therefrom, its purpose, its investment, and its distribution; sinking funds, their purpose and use; partnership problems; and interpretation of the changes in balance sheets.

In this connection court decisions, statutory provisions and commission rulings should be studied to show the reasoning behind the different positions adopted where conflict in thought occurs.

In the study of court decisions one realizes the vagueness with which the court has at times rendered decisions. Had these been based on even a slight knowledge of accounting certain misunderstandings and misrepresentations would have been eliminated.

Thus the value of a study of such cases as "The Lee Case" in the discussion of depletion of wasting assets; "The Verner Case" in connection with dividend payments; Miller Vs. Payne,[2] when discussing the availability of premium on stock for dividend payments; Bassett Vs. U. S. Cast Iron Pipe and Foundry Co.,[3] in regard to the preservation of Surplus; Robinson Vs. Ashton,[4] for discussion of the procedure followed in handling partnership agreements; or Eisner Vs. McComber,[5] when dealing with income from Stock Dividends cannot be over stated.

Accounting questions confronting the practicing lawyers daily, and it behooves them to utilize facilities available in prac-

[1] Accounting Review, p. 263, Sept. 1927.

[2] 136 N.W. 812 (Wis. 1912).
[3] 70 Atl. 929-932 (N.J. 1908).
[4] L.R. 20 Eq, 28.
[5] 252 U.S. 189 (1920).

tically all colleges to gain a better understanding of their problems.

The question of methods to be used in accounting instruction depends to a great extent upon the character of the institution concerned, the viewpoint of the instructor, and the purpose or need for which the knowledge gained is to be utilized.

The purpose or need for which the course is given will probably become the determining factor in the development of a satisfactory course in accounting for law, engineering or other professional schools. To meet their varying needs the instruction should not consist of long monotonous drill in problem work nor should it delve into the intricacies of mooted accounting theories. A short survey of bookkeeping practices, accounting terminology, and financial statements should be presented, and special problems pertinent to the various professions pointed out.

One of the purposes of this paper to point out the value of an accounting course restricted to legal, engineering and other professional men. Such a course would serve as a medium through which these various professional men may gain a knowledge of business principles and practices, which will enable them to more readily speak the businessman's language.

To be specific, a good course in legal accounting should have as its final aim the bringing out of points of contact between law and accounting. A course in engineering accounting should stress costs, and show their utilization in the many reports executives make use of in guiding their various enterprises. In Pharmaceutical accounting emphasis should be placed upon the proper use of departmental records and the use of statements prepared from such data.

To develop a course which shall give the students of these various professions sufficient insight into the subject in the limited time that most schools have allotted is almost a superhuman effort. Too many important factors must be omitted.

A questionnaire recently sent out to various universities included the question, in answer to "do you offer accounting courses to law students?" Five of the 31 schools replying said, "Yes." To the question, give your reasons for giving, or not giving such a course," 19 of the 26 who replied negatively above, gave such reasons as: lack of staff, no money, or crowded curriculum. One school plainly stated that the law school was not interested; the other two schools were non-committal.

These objections are not insurmountable. Certain schools[6] have met the problem of staff and financial deficiencies by picking specialists from other schools and making them a part of the law school faculty.

The objections to an over crowded curriculum may be overcome in some instances by changing the emphasis from the old classification of teaching separate units (i.e. Partnerships, Corporations, Bills and Notes, Contracts, etc.), to a new one called, the Business Unit (i.e. Losses, Management, Finance).[7] The present tendency in a number of schools[8] is to leave business and other courses to the graduate Curriculum. It seems to be the policy of a few schools to require a three year prelegal course and a three year law course, thus allowing room for additional background for the prospective law students.

Eight schools answering the questionnaire believed that this course if given, should be a pre-legal requirement; eight believed it should be an elective law school subject; and one school believed that a prelegal principles course should be followed by a special accounting course given as an elective in the law school. Practically all schools believed that if such a coure were given it must of necessity be a relatively short one because of an already crowded curriculum.

Even though the short course taken by the law student will not enable him to carry out a very extensive practice in ac-

[6] Policy at Columbia University.
[7] Plan of Procedure adopted by Yale University.
[8] Followed at University of Colorado.

counting, it will, at least, teach him the value of such knowledge so that he will not attempt to meet a situation in practice ignorant of the fundamentals of accounting.

The lawyer should, above all men, be well informed, both because of his obligations to the individual client and to society as a whole.

Dean Isidor Loeb of Washington University once said,[9] "Certainly every business man should know the meaning of Balance Sheets and other financial statements. We may go even further and assert that this is a part of a liberal education in these days of modern industrialism and commercialism. . . . Every college graduate 'ought at least to know on which side of the balance sheet the surplus belongs.' Decisions of some courts apparently indicate that some of the judges have not appreciated the nature and meaning of the surplus. The course in elementary accounting develops accurate methods of thought; it is no more vocational in character than English or mathematics and it should be accepted equally with those subjects for the degree of Bachelor of Arts."

One law professor sums up the views of the majority of the legal faculty as follows: "As a law teacher I have never been friendly to an attempt to incorporate into our law curricula courses of study that are and should be primarily given as a part of the pre-legal work for a student who wishes to become a lawyer. The reason for this is that our common law has developed such a host of complicated specialties that every minute of the three years, established as the proper time to be devoted to the study of law, is required to equip and prepare reasonably the student for the practice of law. If our American law schools are to discharge at all adequately their duty to the profession at large and aid in its general advancement, there must be some way devised by which the hearty and intelligent cooperation of our colleagues in the cultural colleges may be secured.

"In our American universities it will be possible to approach the ideal situation only when we are able to create a thorough understanding and a hearty cooperation between the teachers in the cultural courses and the teachers in our professional law courses, whereby each with some degree of intelligent and sympathetic understanding of the work of the other group and of the relation between the cultural subjects and the professional subjects, teach their respective subjects with a mind keenly alive to this inter-relation. When this time comes, as it must come, each of these groups will be able to teach with the increased power and effectiveness."

The consensus of opinion seems to be that a general course is sufficient, but that it should take up those specific problems in which each group is interested.

The legal accounting course at the University of Colorado is designed primarily for senior and graduate law school students, and is given two hours a week for one quarter. In outlining the program of instruction, we based the course upon a three-hour period, and have used the following outline more of less successfully:

1. Theory of ownership and equities
2. The accounting equation
3. Theory of debit and credit
4. Income and expense as distinguished from assets and liabilities
5. Nature, aspect and use of books of original entry—adjusting, posting
6. Trial balance, Balance sheet, and Statement of profit and loss
7. Summarization of principles and procedure
8. Differentiation between single proprietorship, partnership, and corporation accounting
9. Review of accounting terminology
10. General principles of valuation
11. Asset valuation
12. Liability valuation
13. Analysis of net worth items of proprietorship, partnership, and corporation
14. Capital stock valuation—par, no par, donated, etc.

[9] Accounting Review, March, 1927, p. 46.

15. Surplus analysis: earned and unearned, dividend availability, appropriations and reserves
16. Legal and accounting concepts of income, profits, capital, etc.

17. to 30.	Individual problem	Uses of comparative statements. Discuss points of contact between legal and accounting fields. Serves to recall accounting principles and procedure and helps in statement analysis.

In the words of one professor, "accounting is the language in which business thinks and finance talks." Practically every questionnaire returned mentioned the fact that the lawyer, the engineer and other professional men need such knowledge.

To achieve the best and most lasting results the professional man must have some knowledge of the other man's problems, in order to properly guide his client.

In order to meet the accounting needs of legal students as expressed by the majority of law schools two solutions are suggested:

First, to require all law students to take as a part of their pre-legal work a specially designed legal-accounting course; or, where this specialized course is not available, to take the course offered to general business-students. If the general course is taken it should be followed by a law-school course which will bring out the points of contact between law and accounting.

Second, in those schools where it is possible, provide an accounting course as an elective law-school course which is to be taken as part of the legal training within the law school.

To my mind, the second method is the more valuable of the two because it provides that the course be taken when the student realizes its necessity and only a relatively short time before graduation.

CONTENT OF A MATHEMATICS COURSE FOR COLLEGIATE SCHOOLS OF BUSINESS

WILLIAM S. SCHLAUCH

I. MAJOR CONSIDERATIONS IN CURRICULUM MAKING

IN BUILDING a curriculum for any school, two considerations invariably dominate the process:

(1) *The educational objective of the school.* (2) *The character and extent of the educational preparation possessed by the entering students.*

Thus, a college preparatory school fits its curriculum to prepare its students to pass the college entrance examinations, giving them all of the branches in which they will be examined, and such other subjects as are necessary, to give the student an understanding of and mastery over these subjects.

A technical school, such as an engineering school or a school of business is guided by the same principles or considerations. In order that an engineer may succeed, he must be a thorough master of mathematics, and the involved fields of physics, chemistry, economics and accounting. If the students of such engineering schools enter with a high school preparation only, the curriculum will contain courses more elementary in their nature than if they were all college graduates. The collateral English and modern foreign language courses, as well as those in mathematics and physics or chemistry will be much more elementary.

A collegiate school of business will have its curriculum determined in the same way. For the purposes of this discussion we shall define such a school as one which sets up as entrance requirements, graduation from a recognized high school. That is, we assume that the educational preparation of its entering students includes twelve years of work, of a grade which meets state standards. We also assume a four year course for our collegiate school of business; its objective being the training of leaders in the business field, whether they specialized in accounting, advertising, finance, management, or any other special phase. Briefly stated, the object is to train its students and to equip them, so that they may become successful business leaders.

II. OBJECTIVES OF A COLLEGIATE SCHOOL OF BUSINESS

If we analyze the aim of a collegiate school of business, it becomes clear that success in business involves operating or functioning in a business unit which is imbedded in a complex economic society. Its buying and selling operations must be carried on according to the rules of the game as it is played in the modern world. This involves among other things:

1. An understanding of the structure of modern economic society into which any business enterprise must fit, as well as its trends, drifts and cycles.

This involves a study of general economics, money, banking, and insurance, statistics, and the enocomics of the business cycle. Such studies are tending to become more and more definite and mathematical as time passes. Formulae, equations, graphs, and even such tools as calculus, finite differences, least squares, are being used, especially in graduate schools of business. In our typical school, the student of economics must be able to interpret the basic price level equation

$$p = \frac{mv + m'v'}{e}$$

or he cannot grasp fully the relations of these factors in a credit-money economy such as ours. The correlation of the movements of supply and price indices of a specific commodity can be understood more thoroughly from the mathematical treatment combined with the graph, than from the graph alone. The treatises in special fields of economics of such authors as

Moore, Mills, Adams, Persons, Mitchell, and Haney show how definite quantitative studies help the student to master the theory of economics.

Of course all management students must study the business cycle, and the methods of adjusting a business to its changes. This involves statistical and mathematical study in the school of business. What are the forces which cause the cycle to swing from depression to prosperity through recovery, and then to decline from prosperity back to depression? What are the signs and *measures* of these forces, and how can the coming change be forecast? These are questions which the manager must attempt to answer, and the attempt must be made along quantitative lines.

2. A command of the principles, methods, and technique by which a detailed record of the transactions of a business are made, and by which a snap-shot or summary of its financial condition at any time may be obtained.

This means that bookkeeping and accounting are indispensable for all students of business. The condition of the business, as well as its transactions, the gains or losses in net worth must be accessible to the executive or owner *and he must understand fully the language of its records, and all the calculations involved in them.* Of course such records will not be properly made, nor the interpretations be correct unless the calculations and the mathematics on which they are based are understood by bookkeeper, accountant and executive.

Such considerations call for a knowledge of the mathematical principles and methods governing, and drill in, such routine calculations as interest, discounts, present value, mark-up, and the like. They also point to the necessity for teaching those mathematical principles involved in understanding annuities and their application to sinking funds, amortization, bond calculation, obsolescence and replacement, depreciation, and such special problems as bonus contracts and income tax.

A course in business mathematics, in which segregated from the accounting work but closely related to it, problems flavoring of reality to the accounting student are worked, has been found by experience to be not only valuable to the student, but its value recognized by him as well.

III. Educational Preparation of Entering Students

Since graduate schools of business administration have been excluded from our consideration, we may say that the mental equipment and training of the average high-school graduate determine the ability of the student of the collegiate school of business to meet the situations outlined above. Experience as well as educational surveys show that he can not do so without additional instruction, practice and drill in mathematics. Educational-measurement experts tell us that the average intelligence of adults in the United States is that of a child twelve years old. Those who finish high school are a select group, but by analyzing the results of college entrance examinations it has been fairly well established that *the average high school graduate cannot satisfactorily do the following:*

1. Perform operations with fractions accurately.
2. Calculate simple interest accurately, economically, and rapidly.
3. Calculate ordinary and chain discounts.
4. Calculate exact interest.
5. Apply algebraic principles to the derivation of new rules of operation in arithmetic, or new formulas for solving special business problems.
6. See the mathematical implications in a business formula, as

$$A = P\,(1 + i)^n$$

And he frequently has not been taught:

7. Logarithms.
8. Probability.

He has never been taught:

9. Calculation graphs.
10. Elements of finite differences.
11. Elements of calculus.

IV. A Suggested Curriculum

In order that the student in collegiate schools of business, who comes to us with the above limitations and positive attainments, may end by possessing the qualifications outlined above he should have, as part of his training in the school of business, courses essentially like the following. These three courses have been found to be satisfactory instruments for the purpose, and have met the approval of the students as well. The *first* is designed to give a mastery of those mathematical principles and methods which must be used in business, finance, and management calculations, if such calculations are to be made effectively. It is designed to give command of the tools to be used in the *other two courses* outlined below, as well as in more advanced work in the graduate school of business. The other two courses are technical business mathematics courses.

A. Course in General Mathematics for Business Students

1. The Number System with its Algebraic Laws.
   - (a) Structure of the Number System.
   - (b) Commutative, distributive, and associative laws, and short methods of calculation derived from them.
   - (c) The checks of computation growing out of the structure of the number system.
2. Fundamental Processes in Algebra and Application to Arithmetic.
   - (a) Common factor addition and interest on daily balances.
   - (b) Use of negative numbers in addition of denominate numbers.
3. Factoring.
   - (a) Algebraic factoring and multiplying.
   - (b) Arithmetic short cuts arising from these forms.
4. Fractions.
   - (a) Algebraic fractions as type forms.
   - (b) Type forms as guides in arithmetic.
5. Linear Equations and Problems.
   - (a) Mixture and investment problems.
   - (b) U.S. income tax problems.
6. Formulas.
   - (a) Derivation of formulas from business data.
   - (b) Solving formulas for various letters.
   - (c) Interpretation of solutions, stating Rules of Operation from solution of formulas.
7. Quadratic Equations.
   - (a) Completing the square.
   - (b) Solution by formula.
8. Simultaneous Equations.
   - (a) Both linear.
   - (b) One linear, one quadratic.
   - (c) Applications.
     1. Ratio of solvency problems.
     2. State and Federal tax problems.
9. Coordinates and Graphs.
   - (a) Statistical graphs, general principles.
   - (b) Coordinate system.
   - (c) Graphic solution of systems of equations.
10. Theory of Exponents.
11. Logarithms.
    - (a) Logarithmic theory.
    - (b) Applications.
      1. Computation by logs.
      2. Compound interest by logs.
12. Permutations and Combinations.
13. Probability.
    - (a) Theory.
    - (b) Application to life and fire insurance.
14. Triggnometric Functions.
    - (a) Sine, cosine, tangent.
    - (b) Solving right triangles.
    - (c) Statistical and functional expressions involving trigonometric functions.
15. Elements of Differential Calculus.
    - (a) Variable and function.
    - (b) Meaning of $\frac{dy}{dx}$

(c) Formulas of differentiation.
(d) Problems in rates of change.
(e) Maxima and Minima.

The above fifteen topics can be covered adequately in 60 hours. They include the indispensable tools used in the courses following. The problems given should, so far as possible, be practical business problems which illustrate the use of the mathematical principles developed.

B. Elementary Business Mathematics

I. Routine Calculations and Processes

1. Simple Interest.
   (a) Development of special rules from the equation $i = pr\frac{n}{100}$; 4%, 4½%, 6%.
   (b) Bankers' one-day rule developed from the equation.
2. Bank Loans and Bank Discount.
3. Converse Cases of Interest.
   (a) Derivation from formula.
   (b) Application to banking and interest.
4. Present Worth and Proceeds.
   (a) Comparison of these values.
5. Exact Interest.
   (a) Its equation $i = pr\frac{n}{365}$.
   (b) Relation to ordinary interest.
6. Commercial Discounts and Discount Series.
   (a) Derivation of $s = r_1 + r_2 - r_1r_2$.
   (b) Construction and use of tables.
7. Mark-up and Selling Price.
   (a) Relation of cost, overhead, profit, and selling price.
   (b) Selling and mark-up factors.
8. Compound Interest.
   (a) Derivation of formula. $A = P(1 + i)^n$.
   (b) Finding compound amount.
      1. $(1 + i)^n$ Calculated by arithmetic.
      2. $(1 + i)^n$ Calculated by Binomial Theorem.
      3. $P(1 + i)^n$ Calculated by Logarithms.
9. Converse Cases of Compound Interest.
10. Present Value of Long-time Obligations and Compound Discount.
11. Commuting Long-time Obligations.
    (a) Commuting one series of payments into another.
    (b) Fixing due date for a series of obligations.
12. Equation of Accounts-Average Due Date.

II. Accounting and Finance Calculations

13. Series-Arithmetic and Geometric.
    (a) Installment payments with interest.
    (b) Application to building and loan and equated time calculations.
14. Annuities Certain.
    (a) Ordinary annuities.
    (b) Annuities due.
    (c) Tables.
15. Converse Cases of Annuities.
16. Sinking Fund Calculations.
    (a) Finding the amount or final value.
    (b) Finding the periodic contribution.
    (c) Finding the number of contributions necessary.
17. Amortization.
    (a) Term and serial plans of financing.
    (b) Serial bond calculations.
18. Bonds.
    (a) Basis price on interest day.
       1. Separate valuation of face and interest.
       2. Valuing excess or deficit of income.
    (b) Basis price of bonds bought between interest days.
    (c) Bond tables and their calculation.
    (d) Yield rate from tables and by approximate formula.

Throughout the above 60 hour course, the tools developed in the General Mathematics Course are most helpful. Compound interest, annuities, sinking funds and bonds

employ logarithms. The topics should be treated both algebraically and by arithmetic, and the great saving of labor involved in the algebraic treatment thus made evident to the student.

C. Advanced Mathematics of Business-Management, and Planning and Forecasting

1. The Slide Rule for Calculation and Check.
   (a) Relation to logarithms.
   (b) Applications to business calculations:
      1. To check multiplication and division.
      2. To calculate percentages.
      3. To calculate interest.
      4. In retail selling.
2. Graphs in Business.
   (a) Calculation graphs.
   (b) Managerial graphs.
   (c) Alignment charts.
3. Finite difference tests for functions.
   (a) Forms:
      $y = ax + b.$
      $y = ax^2 + bx + c.$
      $y = ab^x$
      $y = abc^x.$
4. Least Square Formulas for Best Fitting Curves of Above Types.
5. Fitting Curves to Business Data.
   (a) In budgeting: sales, expenses, etc.
   (b) Limit of error and reliability.
6. Investment and Yield. Rates on Loans.
   (a) Building and loan stock.
      1. Methods of distributing profits.
      2. Yield to investor and cost to borrower.
   (b) Industrial loan plans.
   (c) Interpolation formulas for extended tables.

$$y(1 + \Theta) = y_1 + \Theta\Delta^1 y_1 - \frac{\Theta(1-\Theta)}{L^2}\Delta^2 y_1 + \frac{\Theta(1-\Theta)(2-\Theta)}{L^3}\Delta^3 v$$

7. Bond Issue Calculations.
8. Infinite Series and Capitalized Cost.
9. Mathematics of Depreciation.
   (a) Straight line method.
   (b) Reducing balance method.
   (c) Sinking fund method.
   (d) Annuity method.
10. Obsolescence and Replacement.
   (a) Replacements vs. alterations.
   (b) When the retention of obsolete machines causes a loss.
11. Exhausting Assets.
   (a) Haskold's formula.
   (b) Modifications of Haskold's formula.

TEACHING THE ACCOUNTANT THE HISTORY AND ETHICS OF HIS PROFESSION

JOSEPH C. MYER

THE subject of this paper is one that has been of interest to me for the past ten years. During this period I have been in contact with accountants and students of accounting through classroom connections, actual practice and in employment agency work. My experience has impressed me with the lack of knowledge that many accountants have of their own profession. In many instances I found not only a lack of knowledge but also a lack of desire to gain such knowledge. Not only were the historical aspects of accountancy unknown, but such important matters as laws affecting the profession, societies of accountants, and the ethics absolutely essential to the proper practice of accountancy were unheard of in some cases. Many of these accountants were familiar with the general aspects of their own state C.P.A. laws, but they were totally ignorant of what was going on in other states and foreign countries in such matters as title protective or regulatory legislation.

This ignorance exists not only among private accountants in executive positions with corporations, partnerships, municipal, utility and other enterprises, but also among the public practitioners, particularly those who have recently entered into practice. It is true that the uninitiated after coming in contact with tried practitioners gradually absorbs essential bits of information but this method is slipshod and many accountants in practice for themselves or with small firms have no opportunity to receive the professional information they need.

Accordingly, three and a half years ago when St. John's College School of Accounting, Commerce and Finance was organized, a one hour course on "The History and Survey of Accountancy" was included in the curriculum for freshmen. The course comprised sixteen class lectures on the following topics: history of accounting and bookkeeping, accountancy legislation, education and societies and the very important subject of accountancy ethics. Included also were incidental topics, such as how to apply for a position in public accounting.

Inasmuch as there was no text available on any of the above mentioned topics, the students were forced to rely on class notes and collateral reading of magazine articles. This method of instruction while not entirely satisfactory, did stimulate student interest in the profession and it was gratifying to note that the students who secured the best marks in the survey class also stood highest in the technical subjects of accounting theory and practice. Such students did the most effective work on advanced problems, and they developed a real zest and interest which made the detailed work less burdensome.

This past year we have been particularly fortunate in having available a book on "History and Survey of Accountancy," written by Wilmer L. Green who for almost ten years was on the staff of Haskins and Sells in their New York Executive offices. Mr. Green handled the employment of juniors, semi-seniors, and seniors for the country-wide staff of Haskins and Sells. The book contains chapters on the history of accounting and bookkeeping, legislation in the states and foreign countries, education for the profession, stressing the need for collegiate education, accounting societies, ethics and a synopsis of the 48 state and 4 territory C.P.A. laws. Written in non-technical language, easily understood by the beginner, the book aroused even greater interest than existed before in the Survey Class.

Now then—why teach the student historical facts about his profession?

The History of Accounting. In 1900 a group of prominent accountants and educators met in the City of New York and established an institution which was destined to render great service to the profession. At that time the School of Commerce, Accounts and Finance was established at New York University and, incident to this establishment, was the creation of a Chair of Auditing and History of Accountancy which was filled by the first Dean of the School, Charles Waldo Haskins, one of the pioneers of the public practice of accountancy in the United States. Mr. Haskins considered a study of the history of accounting so important that he often expressed the wish to be able to write a history of accountancy for the benefit of students who desired to enter the profession.

The History of Accountancy in Holland. Looking about in foreign fields we find that one of the countries in which the profession is on an exceptionally high plane is Holland. All candidates for membership in her two accountancy societies, "The Federation" and "The Institute," have been for years required to pass a course in the history of accountancy.

The Benefits of Studying the History of One's Profession. The study of history acquaints a student with the mistakes and the achievements of those who preceded him. What man has done under certain conditions, he will do again under the same conditions. The successes that have been built up in one state of facts will be successes in the future in the same state of facts. The study of facts and conditions, and this is important, will give the student reasoning ability that later will permit him to apply such remedies and measures that are necessary to turn possible failures into successes. Specifically, the accountant who merely has his knowledge of debit and credit, or who knows a chart of accounts and has had training in recording facts in books of account will not succeed unless he knows how to present these facts to his client in such manner as to preclude any misunderstanding. The accountant who can apply good sound and basic reasoning to one set of business facts will, with the study of what other accountants have done before him, be able to reason other situations accordingly.

This principle in education, with later specialization, is the chief difference between training of accountants in the United States and the training of accountants in some of the foreign nations. In many instances abroad the accountant must pass a number of years of apprenticeship to the exclusion of classroom education before he can qualify for the title designating him as an accountant. The training acquired in this apprenticeship is limited to the number of jobs on which he works. If, during his five or ten years of apprenticeship, he is confined to auditing the business facts of only a few types of business organizations, and if during that time he has not acquired in classroom work the benefits of what other accountants have done before him, he will be limited in his knowledge and later when he attempts to analyze other business facts his success will be hampered.

In studying the history of any subject, and particularly that of a profession, the student traces the evolution of the profession from its early stages to its more intricate stages. It is an established educational fact that one who knows how a certain set of facts have come about will be able to reason better from these facts their own conclusion. I do not advocate that a great amount of time be spent on such study, but the student who knows that the art of keeping records dates back to the ancients and that such art has been a gradual evolution leading to double entry principles involved in the twelfth, thirteenth and fourteenth centuries, and since gradually improved, will better appreciate the modern development of intricate records to keep pace with the increasing size of our mammoth corporate enterprises.

Accountancy is different from other professions in that it must precede or at least

keep abreast of the development of commerce. The profession of law usually follows such development, and other professions likewise spring up after commerce has led the way. However, commerce in itself will fall flat unless accountancy provides the means for recording accurately and interpretively, business facts. In other professions the students are acquainted with the deeds of those who invented or thought out the basic fundamentals of their profession. Why shouldn't the students of accountancy be familiar with the achievements of Pacioli, Tagliente, Manzoni, Oldcastle, Snell, Passchier-Goeschens, Simon Stevin, George Watson, Richard Dafforne, Barreme Nicholas Petrie, Robert Colinson, William Jackson, William Mitchell, James Bennett and the others who helped shape the profession in which we are interested?

Legislation. The accountant should be thoroughly familiar with the legislation that in many instances has aided his profession: the distinctions between the protective class of legislation, which merely protects and elevates the C.P.A. to a higher plane, and the regulatory type which regulates the practice and permits only those to practice who are deemed qualified; the two kinds of regulatory legislation, that of the one class and that of the two class types; and the countries which have accounting legislation and how it has fared. Perhaps when these facts are known to him he will realize that the most progressive countries in commerce are those which have placed or are placing accountancy on its proper professional basis.

Accountancy Societies. The student should be taught the benefits that are derived from associations and societies of professional men. The professions of law, engineering and medicine would never have reached their present status if various societies had not worked together in the enactment of proper legislation. He should know the leading associations of accountants in the United States.

Ethics of the Accountancy Profession. There is another study which is extremely important to the budding accountant, that of teaching him what his relations should be:

1. with his client.
2. with the public.
3. with his fellow practitioners.

The study of ethics has been sadly neglected in the teaching of accounting. Too many accountants are turned out without a knowledge of proper professional qualifications. Too many accountants are willing to arrange facts in statements purely for the financial benefit to themselves or their clients. One reason for some of the present failures in business and in banking is that the managers of these organizations were not familiar with all of the facts of their business; or, if they were, some one arranged the facts in a fashion which tended to conceal the true state of affairs. Many accountants are willing to change the character of a transaction in order to help a client secure loans from his bank, or to sell stock of the corporation.

I say that in accountancy there is more need for a strict code of ethics than in many other professions. Contrast the situation of a lawyer presenting a client's case in court and that of an accountant preparing a set of statements for his client. Should the attorney know of some fact which if disclosed might wreck his case—is he in duty bound to come forward and disclose that fact? So far as I have observed an attorney's chief duty is to protect his client, and any fact that might injure his client is probably left unsaid. Consider now the duty of the accountant. If during the course of his investigation of a client's affairs, he discovers some fact, such as a large liability, which if placed on the statement might jeopardize his client's interest or show him insolvent—can he, the accountant, merely neglect to include such item? The answer is obvious, and strongly confirms my belief that the student should be given a sound training in ethics.

By a recent decision in New York State

a large accounting organization was held responsible on its certification of a balance sheet—not to the client but to banks that had advanced loans to that client. This instance is not mentioned as a reflection on the ethical procedure of this particular organization. It merely illustrates the importance of a more general understanding of those matters that make for good practice in the profession.

Teaching the Subjects Mentioned. I do not advocate the teaching of any subjects which may take time away from the technical training that the student must receive. However, I have found in my three and one half years of experimentation at St. John's College that a one or two-hour course dealing with the above subjects if given the beginning student in accounting in the first semester, will give him a much firmer grasp of the technical principles involved. We have found at St. John's that students with no previous training in bookkeeping, who are given a general elementary accounting and survey course, are, after a period of years, better equipped, not only with a knowledge of accounting principles but with better reasoning power, than students who have known bookkeeping methods for years but who lack the elementary training and understanding of the history, societies, legislation and ethics of accountancy.

Mr. Green's new text has helped to solve the problem. The book was written after he had interviewed thousands of applicants for positions. His reaction to such interviews was generally the same—the applicants were totally ignorant of what their dealings should be with clients, with the public and with other practitioners. This condition was not only apparent in former bookkeepers who applied for accounting work, but in commerce graduates.

I believe the accounting profession will benefit, and the individual practitioners will benefit if more of our collegiate schools of commerce introduce courses in the history and survey of accountancy.

CHARGE AND DISCHARGE

STANLEY E. HOWARD

DISTRICT of Massachusetts . . . to wit:

"BE IT REMEMBERED, that on the tenth day of February, in the eighteen hundred and fourth year of our Lord, and in the twenty-eighth year of the Independence of the United States of America—THOMAS TURNER, of the said district, hath deposited in this office the title of a book, the right whereof he claims as author, in the words following, to wit:

"'AN EPITOME OF BOOK-KEEPING BY DOUBLE ENTRY, delineated on a scale suited to the faculties and comprehension of Senior School Boys and Youth designed for the Mercantile line. Comprising systematic and unerring Rules for the forming Monthly Statements of books, as well as those for opening, conducting, adjusting and closing them; with explanations of Theory, and exhibitions of Practice, rendered easy to the smallest capacity, and calculated to initiate them in the true Principles, and to make them perfect in the Rules, by a little practice. . . . To which are added, Rules for keeping Retail Books by Double Entry, without altering the process of Single Entry in the Day-Book or Journal, for all sales of merchandise; by which one-half the writing is saved, and the Ledger exonerated from items, and rendered a prompt and sure proof of Monthly Balances and Annual Profits. . . . Also, The most easy, concise and safe way of calculating any Rate per Cent and especially that of Six per Cent per Annum. . . . By THOMAS TURNER, Professor and Teacher of Book-keeping, at Portland.'"

"In conformity to the Act of Congress of the United States, intitled, 'An act for the encouragement of learning, by securing the copies of maps, charts and books, to the authors and proprietors of such copies, during the times therein mentioned;' and also to an act . . .' etc., etc. . . ."

Thus reads in part the unpromising copyright notice of a little old textbook, a leather bound volume of 148 pages, each measuring 4" x 6¾". The book was printed by Jenks and Shirley "for Thomas Clark (proprietor) and [was] for sale at his Bookstore, *Fish Street* [in Portland], and by the principal Booksellers in the *United States*." It is a curious little work, fascinating to students of accounting and of value to those interested in historical and descriptive economics. Its pages contain not infrequent sparks of wit or humor and evidences of a humanness of business relations which in present day popular thought are often considered no longer to exist. Interest attaches to the book also because it contains a contribution to the history, if not to the theory, of pedagogy; it is one of the earliest American specimens of textbook production in the field of commercial subjects. It has its place in the literature of education.

Whether this little volume was ever formally reviewed is doubtful. It is not the intention of the present writer, however, to "review" the book. Rather this memorandum is intended to translate or interpret the spirit of Professor Turner's treatise.

It is clear that Professor Turner had a fairly definite conception of his educational objectives and a high opinion of the social usefulness of his profession. He says (pp. 7-8):

> The increase of the commerce of this country, and the unbounded field open to it for speculation and commercial prospects, will exceed all common calculations; and most likely those of the most sanguine friends of prosperity. In this view, it is an object of the first consequence to that part of the rising generation designed for mercantile pursuits, to become early acquainted with the principles of book-keeping; and the most judicious rules that can be devised to obviate error in the process, and embarrassment in the adjustment and closure of books.

Again (p. 7):

> Experience has proved to the author, that youth may be initiated in the principles and made perfect in the rules, by a little practice, when arrived at the last stage of schooling; and when they are capable of associating and connecting their ideas, and of drawing conclusions from premises laid down and delineated in a manner suited to their faculties and comprehension.

And again also (p. 144):

> The object of this work is to initiate youth, when at the last stage of schooling, and to insure their having a right conception of book-keeping by double entry, and the rules appertaining, thereto; so that on their entrance into the merchant's employ, or engagements in business, they may be able to perfect themselves, without the smallest difficulty.

The author also had a clear conception of what he considered to be sound and effective pedagogical methods to be employed. His method of instruction was this. After the reading of the pertinent explanations and instructions (which were very brief), and the study of a miniature set of books designed to present a conspectus of double entry procedure, the student was given a laboratory problem, or rather two such problems. The first of these dealt with the affairs of an enterprise of the sole proprietor type; the second with the affairs of two brothers, John and Thomas Mercator, who were partners. In each case there was presented a series of transactions journalized in good form (with all the usual informal explanations), posted in good form, and accompanied by all the necessary or recommended subsidiary records, papers and statements.

Thus instruction was by the use of models rather than by the long discussion of principles and rules. The procedure of the student in the performance of the two laboratory exercises was, first, to copy in his own journal verbatim and with exact imitation of the technical forms prescribed, all that he found in the "copy book." Then, after studying the model ledger, he was to put aside his text, post his journal entries, close the ledger and prepare the statements. In brief, the laboratory instruction employed was chiefly of the copy-book type. Incidentally, the student must copy, either in a note book or in his journal all the principal rules and explanations presented in the text. Apparently Professor Turner had great confidence in a system of study and work which required of the student writing as well as hearing and seeing. At any rate he says (p. 148):

> After the [second] exercise, a scholar of common capacity will know how to proceed with any set of books, and will gain a sufficient knowledge to be able to form a small set of books from his own ideas, by the rules he has gone through, and from the knowledge he then must have acquired of the regular process, from commencement to the closure of books.
>
> The rules for commencement, progression, adjustment, and closure, should be gotten by heart by every scholar. . . .

There is in this little text nothing which approximates a theory or thoroughgoing explanation of debit and credit entries, such as is found in modern college texts in accounting. It can hardly be said that the author's rules of debit and credit are comprehensive. He says (pp. 9-10):

> Book-keeping by Double Entry is a system of charge and discharge.
>
> A Charge is a single entry, exhibiting the debtor side only, and does not form a complete account without the discharge.
>
> A Charge and Discharge, exhibits a complete account of debtor and creditor, with the balance due on either side.
>
> One or sundry accounts made debtor, is the charge.
>
> One or sundry accounts made credit is the discharge.
>
> . . . . . .
>
> The amount of charge and that of discharge, must be always equal—consequently the total amount of the additions on the debtor side of all the accounts open in the ledger,

when posted up, must be equal to the total amount of the additions on the credit side, or otherwise there must exist an error either in the wrong addition of the sundries in the journal, or a wrong posting therefrom in the ledger.

And again (p. 143):

That there is nothing abstruse or difficult in charge and discharge by double entry, is evidenced both from its nature and proof.—If a person knows how to make a charge, common sense dictates the discharge, and tells him it must be given to that head of account standing charged therewith on the books; . . . and the exercise of common reason will at all times, with as much facility, dictate the account to be charged and that to be discharged, by only considering what accounts are affected by the transaction.

If there was any "philosophy" underlying such instruction, it was one which was expressed in terms of responsibility and one which employed or implied a personification of the ledger accounts.

The miniature set of books already referred to illustrates this point. The proprietor of this miniature enterprise is represented as having commenced business in Portland on Jan. 1, 1803 with a capital or "stock" of one hogshead of rum valued at $100. Rum account is debited and Stock account (our modern Capital account) is credited. Or, in the language of "Professor" Turner (p. 14):

Rum account takes up the charge and becomes accountable to Stock account, the representative of the person and his sole concern.

Next, on Jan. 2, the rum is sold to one John Toper for $110.

John Toper takes up the charge, discharges Rum, and becomes accountable.

But John Toper is not, apparently, a satisfactory open account debtor, and immediately gives his non-interest-bearing note for $110 payable in sixty days.

Notes Receivable takes up the charge, discharges John Toper, and becomes accountable.

Subsequently, 41 days before maturity, the note is discounted at the bank at "½ per cent."—apparently for 30 days. Cash and Notes Receivable are respectively charged and discharged in the amount of $110. Cash is at once discharged in the same amount, and Interest and Bank are charged in the amounts of $0.76 and $109.24 respectively.

"Closure" follows. Rum transfers to Profit and Loss a credit item of $10; Interest a debit item of $0.76. Profit and Loss closes to Stock a credit item of $9.24. Bank is closed to show a debit balance of $109.24; Stock to show a credit balance of the same amount.

Which [as the author says, p. 15] proves the charge to be equal to the discharge, and the books to be right; and business commences with a new and augmented capital.

It is interesting and from a historical point of view instructive to follow through the "stories" of the two laboratory exercises. In the first of these the proprietor is represented as being one of the sons of James Mercator; whether John or Thomas, the partners of the second exercise, is not specifically indicated. This young man of small affairs, perhaps intentionally regarded as in many respects similar to the students "at the last stage of schooling," commenced business on Jan. 1, 1802, with a net capital investment of $29.25, of which $25.00 was in cash and the remainder the excess of certain accounts receivable balances over the balances of accounts payable. Parental encouragement, of truly Yankee characteristics, appeared on Jan. 20 in the form of a loan of $50.00 in cash, explained in the journal thus (p. 24):

For my Note given this day to my honored Father, payable in 6 months, for a Loan of this sum granted me on the commencement of my business, and which he promises to relinquish on proof of my good conduct.

Whether this "good conduct" was to be interpreted in terms of economics or of ethics is not clear from the context. At any rate on June 20 Notes Payable was charged and Stock discharged in the amount of $50.00, with this explanation (p. 30):

> For this sum, due on my Note to my honored Father, dated 20th January last, now cancelled by a gift thereof to me, for assistance in my future business, . . .

When the books were closed ten days later Stock showed a new credit balance of $101.84. Profits, exclusive of the gift were thus $22.59, or over 70 per cent on the initial capital.

Apparently "Professor" Turner with all his regard for the copy-book method of laboratory procedure assigned no special importance to frequent repetitions of routine entries. Rather he seems to have attempted to "sample out" the types of transactions in which a young merchant in a seaport town of approximately 7,000 population, trading under the conditions of the first decade of the nineteenth century, would be likely to engage. And so we find entries which not only serve to instruct in the procedure of account keeping but also render more vivid the mercantile life of the period. It is in this part of the text that there is a real contribution to the materials, if not to the literature, of American economic history.

For example, it is represented in the first exercise that on Feb. 15, 1802 young Mercator "adventured" certain merchandise to "the Havanna." The goods, 5 quintals of fish purchased on credit (by a note given) of John Cod, and 10 pieces of Nankeen similarly purchased on credit of Samuel Draper, were charged, at $27.00 invoice costs plus certain accessory charges (the cost of an empty hogshead for the fish and costs of "package and truckage") to Adventure to the Havanna. They were shipped on "the brig Speedwell, Captain John Goodluck, on my own account and risk" (p. 25). Sundry appropriate accounts were "discharged." At Havanna, Captain Goodluck sold the fish and cloth for $55.00, deducted duties, freight charges and commissions amounting to $8.75, and reported net proceeds of $46.25. Captain John Goodluck was charged and Adventure to Havanna discharged in this amount. But this was not the end. The good captain bought with the proceeds of the consignment sales of fish and cloth two barrels of sugar, 6 cwt., at $7.00 per cwt., added a commission of 5 per cent, $2.10, and a freight charge of $2.00. Sugar account was charged $46.10 and Captain John Goodluck correspondingly "discharged." This left the captain owing 15 cents; which debt was in due time discharged by cash payment. As a sequel, young Mercator bartered one of the barrels of sugar for ten pieces of India cotton. The sugar was valued for the exchange at $12.00.

Apparently Professor Turner considered ability to handle consignments important under the contemporary trading conditions. He had his young merchant sell to Peter Paywell silk cloth ("Lustrings") shipped on consignment by John Trader of Boston. From the selling price of one piece of such cloth, $12.00, there were deductions of freight, $0.25, and Mercator's commission, $0.60, leaving proceeds of $11.15. This was on March 8. Apparently John Trader in Boston gave liberal terms for prompt settlements. Under date of April 5 Mercator charged Trader and "discharged" Interest $0.06—"For Interest on $11.75 [$11.15?], being on my anticipated remittance to him this day, as per Account Current, per post, at 12 [½?] per cent" (p. 28). The remittance appears to have been truly "anticipated", for not until April 30 did Mercator actually remit "to [John Trader's] order in John Sharp's bill on Paul Punctual, at sight, for nett proceeds of Lustring." The amount was $11.09.

In this first laboratory exercise, in a

series of journal entries covering only nine small pages, transactions which sample an amazing variety of business events are set down for intensive study and transcription. In addition to those events which have been already indicated, goods were bought and sold in simple transactions, notes were received and given, business was done with the bank, and expenses were incurred and paid. Samuel Neverpay, a trade debtor, became bankrupt and his creditors received 90 cents on the dollar. The hat was passed in the street for "the relief of Mr. Timothy Worthy, an unfortunate trader" (p. 31). Mercator subscribed and paid one dollar, charging the item to "Expence Account." This may be doubtful accounting. Likewise it may today be regarded as of doubtful propriety to charge "Expence" for "a new Surtout," for a "pair of Pantaloons," for a hat, and for miscellaneous petty sums taken for "Pocket Expences." But Mercator was by the conditions assumed a sole entrepreneur. The law recognized no distinction between his business and his personal affairs. Perhaps there was none.

As one might expect, the second laboratory exercise was somewhat longer and more complicated than the first. John and Thomas Mercator were equal partners, each contributing $100.00 of original investment, partly in cash and partly in sugar, India cottons, coffee and molasses. Each partner had his own Stock account; likewise his own "particular" account, to which were charged withdrawals of merchandise and of cash. Also, it appears that on April 8 (the books are represented as opened on Jan. 1, 1803) James Mercator, the father of the partners, purchased "1 piece [of India cotton] delivered to our mother," $8.00; and on the 15th of the month one piece [of silk or "Lustrings"] similarly delivered, $20.00 (p. 69). On Dec. 2 the charge to father Mercator was canceled, the journal explanation being (p. 82):

> For Balance of his Account, being for 1 piece Lustring and 1 piece India Cotton delivered to our honored mother, and which we mutually agree to cancel in this manner, as a small token of gratitude to our honored parents for their parental solicitude for our welfare, and their unremitted attention to our education.

The charge was equally divided between the "particular" accounts of the two partners.

These partnership books, too, contain some interestng stories of "adventures," one "to the West Indies," another "to Havanna," and a third "of Rum to Baltimore." Since it clearly appears that Professor Turner in his preparation of good "copy" was trying to simulate on a miniature scale the conditions of contemporary commerce, it may be well to trace the outline of these adventures.

On Feb. 5, 1803, Adventure to the West Indies was charged $69.30 for fish and butter at invoice prices plus truckage, package and insurance. The goods were laden in the "ship Success, Captain Wm. Fearnot, bound to the West-Indies and a market" on consignment to the captain (p. 66). The Fish and butter were sold at destination; sugar and molasses were purchased and brought to Portland; customs duties were paid, as likewise a small balance due to Captain Fearnot. Subsequently the molasses was distilled into rum and became the basis for the "Adventure of Rum to Baltimore." The rum was sent thither in the schooner Jane, consigned to Simon Steady, apparently a Baltimore merchant, who sold the rum, bought "30 barrels of superfine flour" and shipped the same to Portland on the brig Nymph.

The account Adventure to the West Indies shows a gross profit of $60.70 on a recorded investment of $69.39. Adventure of Rum to Baltimore shows a profit of $43.00 on a recorded investment of $212.50. The "Adventure to Havanna" was less fortunate. Flour and fish at a total cost of $213.00 were shipped on the brig Flora on consignment to the captain,

James Smart, "on our account and risk." But John Risk carried the insurance to the amount of $200.00 in consideration of a premium of $10.00. This was on July 20. The vessel and cargo were "burnt in Hispaniola by the Blacks when in a state of insurrection" (p. 88), and John Risk on Dec. 3 made good the insurance. Apparently others in Portland lost in similar adventures in the brig Flora, for John and Thomas Mercator paid $2.00 as their share of the cost of translating the papers "covering loss of our Adventure to Havanna." Profit and Loss was also charged and Adventure to Havanna discharged for $13.00 "short insurance."

Such is, or was, the romance of enterprise as recorded by the "charges and discharges" of these laboratory exercises in bookkeeping. In one year these two young men increased their combined proprietary equities from $200.00 to $667.95, by a series of transactions arranged by the instructor to introduce, if not render intimately familiar, a wide variety of business relationships and events.

THE ACCOUNTING EXCHANGE

First-year Examinations

The purpose of the elementary accounting courses given at the University of Illinois is to give the student a thorough knowledge of basic transactions and fundamental procedure. It is expected that the student will acquire sufficient familiarity with business procedure, transactions, accounts, books, and statements to enable him to enter into advanced courses without undue difficulty.

As far as possible the examinations should not only test the knowledge of the student, but they should present sufficiently varying situations to bring out the resourcefulness of the student, and show his ability when confronted by unusual problems. The questions may be fairly short so that a variety of problems may be given. Generally speaking, questions related as to facts are inadvisable because an error in one part may influence the result of another section of the examination.

Much of the material given in an elementary accounting course can be disregarded when an examination is prepared because it represents routine work. On the other hand, the final examination for the first-semester accounting course can usually be counted upon to contain considerable material in journalizing; the analysis of transactions is fundamental in any introductory accounting course.

The following subjects are usually included in the first-semester examination: (a) the classification of accounts; (b) the preparation of short financial statements; (c) adjusting entries; (d) closing of the ledger (a trial balance is generally given from which to work); and (e) books of original entry.

The second-semester course is devoted more to accounting procedure. For this reason the final examination given in the second semester may be counted upon to have a large number of difficult journal entries covering a wide variety of transactions.

In addition there is usually a question on each of the following: (a) controlling accounts, or, more often, a short problem requiring the setting up of the controlling account and the subsidiary ledger, and the preparation of a list of accounts to prove the work; (b) a simple bank reconciliation statement requiring from three to five adjustments in addition to the consideration of outstanding checks; and (c) special columnar books, including books of original entry and auxiliary books. The latter problem usually calls for the purpose of the book, method of posting, and differences between books that may provide the same type of information.

The examination for the second semester may include problems: (a) requiring adjusting entries, where the amount must be calculated as well as entries formulated; (b) requiring the opening of the books of a corporation, or requiring the changing of a single proprietorship or partnership into a corporation; (c) on consignments; (d) on the use of branch accounts; or (e) dealing with the calculation of the inventory and the cost of sales when the sales and the rate of mark-up is given.

A Typical Examination for the First Semester Course at Illinois

Part I (about 15 min. 8 per cent)

1. State clearly a rule governing the debiting and crediting of all accounts.
2. Give a general classification of accounts with subdivisions under each. (Do not name specific accounts.)
3. State definitely all the posting made from the Cash Receipts book.
4. What are the essential parts of every journal entry?

Part II (about 60 min. 39 per cent)

Enter the following transactions in journal form as they should appear on the books of J. C. Clark, Champaign, Ill. (Omit explanations—number the transactions in the middle of the page.)

1. January 4. He buys from R. J. Miller & Co., Chicago, Ill., merchandise, $489.20, terms 2/10, n/30, f.o.b. Chicago.
2. January 5. He receives a letter from R. J. Miller & Co. stating that the merchandise sold on the 4th has been shipped prepaid and that they are charging his account for the amount of the freight $42.50.
3. January 8. He returns to R. J. Miller & Co merchandise purchased on the 4th which cost $18.25.
4. January 12. He sends a check for $242.50 to R. J. Miller & Co as a partial payment on purchase of Jan. 4 and to pay freight on same.
5. January 13. He receives from A. C. Bowen a 3-mo., 6 per cent, note for $400, on account. The note is dated Jan. 13.
6. January 16. He has his 90-day note for $2,000 discounted at the City National Bank receiving credit for the proceeds. Date of note Jan. 16, rate of discount 6 per cent.
7. January 18. He sends A. B. Martin a check to pay invoice for $500 due today. Invoice is dated Jan. 8, terms 2/10, n/30.
8. January 20. He receives from J. Ross damaged merchandise which he sold Ross last week, $16.20. He also makes Mr. Ross an allowance on some other goods, $10.60.
9. January 24. He accepts a 30 day draft for $250 drawn by R. White in favor of W. Brown. The draft is dated January 22. Mr. Brown receives it on January 23.
10. January 25. He receives from R. W. Harvey less 6 per cent discount a 3-month note for $600 to apply on account. The note is dated November 27 and is signed by W. Owens.
11. January 28. He gives the I.C.R.R. a check for $87.50 to pay freight bills on merchandise bought amounting to $49.20 and the balance $38.30 to pay freight on merchandise sold f.o.b. customer's station.
12. January 29. He draws a 60-day draft for $300 on T. B. Lee in favor of R. G. Wilson. Mr. Lee accepts the draft on January 29 and Mr. Wilson receives it on January 30.
13. January 30. He gives W. Holden a check for $600 to pay 6 months' rent on the store. Rent is for January to June inclusive.
14. January 31. He gives W. C. Long his check to pay his 3-month, 6 per cent, note for $800 which is due today.
15. January 31. He takes from stock for his personal use merchandise that cost $18.50.

PART III (about 30 min. 23 per cent)

Referring to the transactions in Part II above. (Omit explanations—number the questions in the middle of the page.)

(a) 1. Give the entry which would be made on the books of R. White in No. 9.
2. Give the entry which would be made on the books of W. Brown in No. 9.
3. Give the entry which would be made on the books of R. W. Harvey in No. 10.
4. Give the entry which would be made on the books of R. G. Wilson in No. 12.

(b) Assuming that J. C. Clark keeps among other books a Cash Received, Cash Payment, Notes Receivable, Notes Payable and a Journal, in what book or books would the entry in No. 6 be made? If the check off system is used give the entry in each book and explain how it is posted to the ledger.

(c) Give the adjusting journal entries which J. C. Clark should make before closing his books on January 31 for transactions Nos. 5, 6, 10, and 13.

PART IV (about 15 min. 13 per cent)

(a) Prepare adjusting journal entries for A. B. Martin on December 31, 1926.

(Omit explanations—number the entries in the middle of the page.)

1. Insurance expired during the month $17.30.
2. Office salaries not paid $86, sales clerks salaries not paid $116.
3. Advertising material on hand $31.50.
4. Bad debts are estimated at ½ of 1 per cent of net sales, $9,840.
5. In December Mr. Martin gave the *Daily Illini* a check for $70 to pay for advertising copy to be run for seven weeks, three in December and four in January.
6. Estimated decline in value of the delivery equipment because of use in December, $45.

(b) Indicate by number the entry or entries in the above that require readjusting entries.

PART V. (about 40 min. 17 per cent)

1. (a) What form of the balance sheet is advocated by the Federal reserve bank for credit purposes?
   (b) What form of the profit and loss statement?
2. In what statement and section of statement would each of the following accounts be entered?
   (a) Accrued Interest on Notes Receivable.
   (b) Reserve for Bad Debts.
   (c) Inventory at end of fiscal period.
   (d) J. Smith, Drawing. (It has a debit balance.)
   (e) Unexpired Insurance.
   (f) Inventory at beginning of fiscal period.
   (g) Sales Discount.
3. The following accounts are found in a ledger at the end of a fiscal period. Cash, Notes Receivable, Accrued Interest on Notes Receivable, Land, Buildings, Delivery Equipment, Unexpired Insurance, Deferred Advertising, Notes Payable, Taxes Accrued, Salaries Accrued, J. Smith, Capital, J. Smith, Drawing, R. Jones, Capital, Jones Drawing, Sales, Sales Returns, Purchases, Purchases Allowances, Freight In, Inventory, Advertising, Delivery Expense, Salesmen's Salaries, Office Salaries, Office Expense, Rent, Interest Income, Sales Discount, Interest Expense.

   Required: (a) Set of the first two sections of a Profit and Loss Statement. (Use "XX's" as figures.)

   (b) Prepare compound journal entries to close the ledger. (Use "XX's" as figures. Follow closing procedure given in text, indicate which is the new and which is the old inventory, and assume that the Profit and Loss account shows a loss.)

Questions must be returned inside the examination book.

A TYPICAL EXAMINATION FOR THE SECOND SEMESTER COURSE AT ILLINOIS

I. (15 per cent, about 20 min.)

1. State briefly the difference between the invoice register and the purchase book.
2. Name two controlling accounts, other than accounts receivable, and state how you would prove the balance of either of the accounts named.
3. What is meant by "double posting" and when is it necessary to double post an item?
4. In the long problem a student overadded the column for Accounts Receivable A-E by $100 and also overadded the Grocery Sales column by $100. (a) Would the general ledger be in balance?
   (b) What would call attention to this error?
5. State clearly the advantages of using the vouchers payable system.

II. (10 per cent about 15 min.)

(a) From the following information set up the controlling account for Accounts Receivable and the individual subsidiary ledger accounts.

(b) Post the material given. (It is not necessary to set up books of original entry. Assume that the books contain the usual special columns for the controlling accounts.)

(c) Prepare a list of accounts to prove the balance of the controlling account.

April 1 the balance of the controlling account Accounts Receivable amounted to $820. The subsidiary ledger contained the following accounts: A, $310; B, $170; C, $90; D, $250.

The different books showed the following results:

Sales Book: Sales to A, $120; C, $140; D, $200; E, $180.

Cash Receipts Book: Cash received from A, $210; B, $100; D, $150; E, $130.

Notes Receivable Book: Notes received from C, $120; D, $200;

Journal: Sales Returned by B, $5;
Allowance made to E, $5;
Freight paid by A on goods sold to A f.o.b. A's station, $8.

Cash Payments Book: Freight paid on sale made to C, terms f.o.b. our station, $7.

III. (50 per cent, about 70 min.)

Prepare entries in journal form, without explanation, to record the following selected transactions on the books of C. C. White, Champaign (Number the entries in the middle of the page. Show all calculations either below or above the entry.)

1. A 30-day draft for $175 is drawn by C. C. White on T. Jones in favor of R. Brown. It has been accepted by T. Jones.
2. On May 10 a 90-day note for $300, dated April 4, is received from T. Wilson on account less 6 per cent discount. Mr. Wilson is allowed 2 per cent discount on the invoice.
3. Freight amounting to $12.50 is paid on merchandise bought of R. Owens, terms, f.o.b. Champaign.
4. A new typewriter is purchased for $115. Payment is made by giving a check for $75 and the old typewriter bought just four years ago for $100. Monthly depreciation entries have been made at the rate of 10 per cent per year.
5. On April 4 he has a 3-month note, dated Feb. 25, discounted at the bank at the rate of 7 per cent. The note is for $600 and bears interest at 6 per cent. The note is signed by J. Ross.
6. On May 25 he receives notice from the bank stating that J. Ross failed to pay the above note and that they have charged his account with the amount due and a protest fee of $2.
7. He accepts a 60-day draft for $200 drawn on him by R. Miller in favor of J. Martin.
8. His balance sheet on May 31 is as follows:

ASSETS

Cash		$ 2,000
Accounts Rec.		10,000
Inventory		15,000
Equipment	$3,000	
Res. for Dept.	1,000	2,000
Total		$29,000

LIABILITIES AND CAPITAL

Accounts Pay.		$15,500
Notes Pay.		10,000
White, capital	$4,000	
Less Drawing	500	3,500
Total		$29,000

Mr. White together with J. Grant and B. Luntey decide to form a corporation with a capital of 250 shares with a par value of $100 each. (The old books are to be used by the corporation.)

Mr. White is to receive sixty shares and is to pay for them by turning over his present business exclusive of cash. Mr. Grant subscribes and pays cash for forty shares. Mr. Luntey subscribes for twenty shares and pays the first installment, $1,000, in cash.

9. W. Jacobs subscribes and pays cash for five shares of stock at par.
10. The company purchases ten shares of stock from White at $105 per share.
11. They sell to R. Long five shares of the stock purchased from White at $105 per share.
12. The profit and loss account shows a profit of $600. Give the entry to close it.
13. A dividend is declared, amount $300.
14. Merchandise costing $250 is shipped to R. Thomas to be sold on consignment. Thomas is a del credere agent.
15. Freight charges, amounting to $16, are paid on the above consignment.
16. At the end of the month an account sales is received from R. Thomas showing sales of $220 and expenses of $35 beside a commission of 5 per cent on sales.
17. Make the entries to close the consignment out account assuming that ½ of the merchandise is sold. (Do not include in the inventory any of the expenses of the consignee.)
18. Merchandise, cost $400, is purchased on account of Miller & Co., with the request that it be shipped direct to the branch store.
19. (Use a separate entry for each of the following items.) A report is received from the branch store manager showing the following: Cash sales, $800; Sales on account, $500; Cash collected from customers on account, $400; Expenses $350; the cash in the hands of the branch store manager is handled under the imprest cash system.

IV. (10 per cent, about 20 min.)

(a) From the following information prepare a bank reconciliation statement. (Give the headings of each section). On May 3 C. E. Jones receives his bank statement showing his balance at the close of business April 30 to be $942.64. In checking over his books and checks he finds the following: A check for $100 signed by E. C. Jones has been charged to his account in error. A check for $15 written to pay an advertising bill has never been entered on his books. A note for $400 signed by R. Thomas which he left at the bank for collection has been collected, the bank deducted $1 for collection charges. He had not received a notice of this collection.

He forgot to enter in his books a deposit of $75, and the bank did not enter a deposit of $125 which was taken to the bank on the afternoon of April 30 just after closing hours. Checks not paid by the bank were as follows: No. 470, $70; No. 481, $16.10; No. 483, $10; No. 484, $35.

(b) Give in journal form all entries necessary to correct the books of C. E. Jones (Omit explanations).

V. (15 per cent, about 25 min.)

(The answers to the following should be short and definite.)

1. Explain the method of proving the accuracy of the work in single entry bookkeeping.
2. Explain the method used to prepare a balance sheet in single entry bookkeeping.
3. Explain the method of handling coupon sales as in the case of coupons for ice. Give entries.
4. Distinguish between the Note Receivable Book used as a book of original entry and the Note Receivable Book used as an auxiliary book.
5. Find the inventory for January 31. Inventory January 1, $20,000; purchases during January, $30,000; sales during January, $33,000; average mark-up based on cost 30 per cent.

Questions must be returned in the Examination Book.

H. H. Baily

Liquidation of Partnership Under Court Administration

Very complex accounting problems may be encountered in the distribution of the assets of insolvent partnerships.

The rules for distribution vary somewhat among the different states, and what is given here applies particularly to those states in which the Uniform Partnership Act is in force. A part of Section 40 of that Act provides that:

"(h) Where partnership property and the individual properties of the partners are in the possession of a court for distribution, partnership creditors shall have priority on partnership property, and separate creditors on individual property, saving the rights of lien or secured creditors as heretofore.

(i) Where a partner has become bankrupt or his estate is insolvent the claims against his separate property shall rank in the following order:

I. Those owing to separate creditors,
II. Those owing to partnership creditors,
III. Those owing to partners by way of contribution."

Liquidation is also governed by Subsection f of par. 5 of the Bankruptcy Act which is as follows: "The net proceeds of the partnership property shall be appropriated to the payment of the partnership debts, and the net proceeds of the individual estate of each partner to the payment of his individual debts. Should any surplus remain of the property of any partner after paying his individual debts, such surplus shall be added to the partnership assets and be applied to the payment of the partnership debts. Should any surplus of the partnership property remain after paying the partnership debts, such surplus shall be added to the assets of the individual partners in the proportion of their respective interests in the partnership."

The reason and basis for the foregoing rules seem to lie, according to the weight of authority, in the legal principle known as "Marshaling the Assets." This doctrine has been briefly stated thus: "That a person having two funds to satisfy his demands shall not, by his election, disappoint a party having but one fund," 4 Pomeroy's Equity Jurisprudence (3d Ed.) par. 1414; 19 A and E, Encycl. of L. 1256; and also that "where a creditor has a lien on two funds in the hands of the same debtor, and another creditor has a lien on one of them only, equity, on the application of the latter, will compel the former to make his debt out of that fund to which the latter cannot resort." 26 Cyc 927.

Other reasons for the rule have been given by various courts but these do not appear as satisfactory. If such a rule were not applied by the courts, partnership creditors would have an advantage over individual creditors as the former would be entitled to first claim on the firm assets. This is because of the nature of a partner's interest in partnership property. As co-owner with the other firm members his interest is merely his share of the surplus after the payment of partnership debts. It is well settled that, "the property is vested in the firm, and that no individual partner has an exclusive right to any part of the joint stock until the firm debts are paid, and a balance of account is struck between him and his copartners, and the amount of his interest accurately ascertained." Menagh v Whitwell 52 N.Y. 146, 11 Am Rep 683.

"And this rule, which gives the partnership creditors a preference in the partnership effects, would seem to produce, in equity, a corresponding and correlative rule, giving a preference to the individual creditors of a partner in his separate property. . . . What quality and justice is there in allowing partnership creditors, who have been paid eighty per cent on their debts, out of the joint fund, to come in pari passu (by the same gradation) with the individual creditors of one of the partners whose separate property will not pay twenty per cent to his separate creditors?" Rodgers v Meranda 7 Ohio St 179.

Commenting on the latter statement the court in Robinson v Security Co 87 Conn 268, 87 Atl 879 said: "It apparently did not occur to the writer to supplement this question by another, as to what equality and justice there was in requiring a partnership creditor to rest content with a five per cent dividend derived from the joint fund, while he saw the separate creditors of the partners, against whom he had as valid a claim in severality as did the separate creditors, realize thirty per cent, or even ninety per cent out of the separate estate, which he was forbidden to touch."

This shows that the rule is subject to criticism and that it may operate unfairly in some situations. Other evidence of dissatisfaction is found in the statement of Professor Brannan in the Harvard Law Review (Vol 20 p 594) that "It is true that the rule of marshaling would oblige the firm creditors first to exhaust the estate against which the separate creditors had no claim, but after the exhaustion of the firm estate the rule of marshaling would permit the firm creditors to come against the separate estates pari passu with the separate creditors." Were this the application of the rule, the personal creditors would have the right only to compel the firm creditors to look first to the partnership resources.

In order to illustrate some of the principles mentioned it is assumed that A and B are partners having capitals of $10,000 and $20,000 respectively, and that profits are shared equally. Following are facts to be considered:

	Cash Realized from Assets	*Liabilities*
A and B Partnership	$40,000	$20,000
A Individually	2,000	8,000
B Individually	5,000	6,000

The partnership loss would be $10,000, the difference between total assets $40,000 and the liabilities $20,000, plus the total capital $30,000. This loss divided equally would leave A's interest in the firm $5,000 and B's interest $15,000, and each of these shares would next be applied to the payment of their personal debts. $5,000 plus $2,000, however, would be insufficient to pay the individual creditors of A and they would lose $1,000. $15,000 plus $5,000 or $20,000 would exceed B's individual debts by $14,000, and this remainder would go to B.

Should we further assume that the firm assets amounted to $18,000 instead of $40,000, the results would be as follows: The partnership loss would be $32,000, which loss would leave a debit balance of $6,000 in A's capital account and a credit balance of $4,000 in B's. The firm creditors would lose $2,000 ($20,000—18,000) as there would be no surplus remaining for them from the private estates of A and B. The personal creditors of A and B would lose $6,000 and $1,000 respectively. B would have a $4,000 claim for contribution against A but according to provision III of subsection (i) of Section 40 of the Uniform Partnership Act he could not share in the personal assets of A along with the personal creditors of A as the latter have a prior claim.

H. L. Kunze

FOREIGN ACCOUNTING TERMS

For the present the lists will be confined to accounting terms from the German. The principal sources have been such works as: Nichlish, *Handwörterbuch der Betriebswirtschaft;* Stern, *Buchhaltungslexikon;* Bott, *Handwörterbuch des Kaufmans;* Price, *Volkswirtschaftliches Wörterbuch.*

BETRIEB: Mit Betrieb bezeichnet man eine Zusammenfassung von

Business: By "a business" one means a group of

verschiedenen Produktionsfactoren zur Arbeitsgemeinschaft.

different factors-of-production [working] for a common purpose.

betrieben (verb): to manage, operate, administer, run (a business), follow (a trade).

Betrieb (noun): (1) organized industrial activity, a business or a business organization; management, administration; running a business, exercise of a trade; (2) unit of management, the works, plant, branch factory, workshop.

Betriebs—(used in compounds): working, operating, running, trading, factory, works, etc.

Betriebsanlage: plant, factory.

Betriebsart: method of management.

Betriebsaufwand: administrative expense.

Betriebsausgabe: operating or trading expense.

Betriebsausschuss: executive committee.

Betriebsbeamter: administrative official.

BETRIEBSBILANZ: Man könnte darunter Spezialbilanzen für

Operating statement: One should in this term special statements for

einzelne Betriebe verstehen, ebenso wie Umsatz- Kosten- und Erfolgs-

separate divisions understand, such as sales, costs, and revenue

bilanzen, die in summarischer und bilanzmässiger Weise den

statements, which in summary, tabular form [present] the

Wirtschaftsablauf, (d.h., das wirtschaftliche Ergebnis der Betriebs-

economic cycle (i.e., the economic result of operating

tätigkeit oder die wirtschaftliche Tätigkeit) eines Betriebes darstellen.

activity or the economic activity) of a business [ ].

BETRIEBSBUCHHALTUNG: In dem Begriffe "Betriebswirtschaft"

Industrial bookkeeping: In the concept "industrial organization"

versteht man unter dem Bestimmungswort "Betrieb"

one understands by the key-word "organization"

die "Unternehmung als Ganzes." In "Betriebsbuchhaltung" aber

the "enterprise as a whole." In "industrial bookkeeping" however

ist das Wort "Betrieb" in einem engeren Sinne gemeint.

[ ] the word "industrial" [is used] in a narrower sense [ ].

Es bezieht sich zunächst nur auf eine Art der Unternehmungen, auf

It refers chiefly only to one kind of enterprise, to

die Fabrikunternehmung. Der Begriff "Betrieb" ist aber noch

the manufacturing enterprise. The concept "industrial" is however still

weiter einzuschränken, nämlich auf die technische Abteilung einer

further limited to the technical division of a

Fabrik im gegensatz zur kaufmännischen.

factory in contrast to the commercial.

Betriebseinrichtung: plant equipment.

Betriebseinstellung: shut down.

Betriebsführung: business management.

Betriebsgebäude: factory buildings.

Betriebsgesellschaft: manufacturing corporation.

Betriebsgewinn: trading profit, gross profit.

Betriebsjahr: fiscal year.

Betriebskapital: working capital.

Betriebskoeffizient: operating ratio.

BETRIEBSFONDS: Wenn von einen Betriebsfonds gesprochen wird, so sind

Working assets: If of working assets one is to speak, then are

jene Vermögensbestandteile der Unternehmung in Auge

[to be held] those property items of the enterprise before the eyes

zubehalten, die den wirtschaftlicher Character des Mittels

[ ], which [possess] the economic character of means

zum Zweck besitzen. Der Gewinnermittlung hat dieses

to an end [ ]. For the ascertainment of profit [ ] the

Fondsrechnung vorauszugehen. Erst ist
accounting for these assets [has] first to be treated. First [ ]
der Status des Betriebsfonds festzustellen und auf seine
the condition of the working assets [is to be] determined and up to their
alte Höhe zu bringen, ehe von Gewinnen gesprochen werden kann.
original amount brought, before profits can be spoken of.

BETRIEBSKONTO: Ein Betriebskonto ist ein Konto, das
Trading account: A trading account is an account, which [takes up]
auf seiner Debetseite die durch eine bestimmte Operation oder durch
on its debit side the through-a-definite-operation
einen Betrieb verursachten Aufwendungen, auf seiner Kreditseite
caused expenditures, [and] on its credit side
den Ertrag oder den Erlös als Entgelt für die durch dieses
the results or proceeds as compensation for the through-this-
Operation oder diesen Betrieb hervorgebrachte Leistung aufnimmt.
operation-achieved service [ ].

Betriebskosten: operating costs.
Betriebskredit: trading credit, line of credit.
Betriebslehre: science of industrial organization or management.
Betriebsleiter: managing director, works manager.
Betriebsleitung: management.
Betriebsmaterial: stock in trade.
Betriebsmittel: working capital, trading assets.
Betriebsrat: works council.
Betriebsstatistik: industrial statistics.
Betriebsstätte: work shop.
Betriebssteuer: payroll tax.
Betriebsstillung: shut down.
Betriebssystem: system of production.
Betriebstechnisch: pertaining to business technique.
Betriebsüberschuss: trading surplus, gross profit.
Betriebsunkosten: operating expenses.
Betriebsverlust: trading loss.

BETRIEBSVERM GEN: Betriebsvermögen kann das Gegenstück zu
Working assets: Working assets can [be set] in contrast to
Anlagevermögen innerhalb des Gesamtvermögens einer Unternehmung sein.
the fixed assets within the total property of an enterprise [ ].
Dann bezeichnet das Wort diejenigen Vermögensteile, die nicht
Then indicates that word those items of property which do not [remain]
dauernd (für längere Zeit als Gebrauchsgüter) in der Unternehmung
(for a long time as consumable goods) in the enterprise
verbleiben. Zwei Gütergruppen mit wesentlichen Verschiedenheiten
[ ]. Two groups of goods with substantial differences
das Betriebsvermögen bilden: Umsatzträger, Regulierungsgüter.
[constitute] the working assets [ ]: salable goods, deferred charges.

Betriebsverwaltung: industrial administration.
Betriebsvorrat: stock in trade.
Betriebswert: going value, goodwill.
Betriebswirtschaft: business economics, business administration, industrial organization.
Betriebswirtslehre: science of business administration.
Betriebswissenschaft: science of industrial organization.
Betriebszahl: operating ratio.

A. C. LITTLETON

COVENTION REPORT

American Association of University Instructors in Accounting; Proceedings of the Fifteenth Annual Convention, Cleveland, Ohio, December 29-30, 1930

THE fifteenth annual convention of the American Association of University Instructors in Accounting was held in the Hotel Cleveland on December 29 and 30, 1930. Sessions were presided over by President A. H. Rosenkampff. The program follows:

MONDAY, DECEMBER 29, MORNING SESSION

Subject: Problems of Teaching Accounting and Allied Subjects.

Chairman: President Rosenkampff, New York University.

Papers by Messrs. G. H. Newlove, University of Texas; A. C. Littleton, University of Illinois; W. S. Schlauch, New York University; H. W. Kendrick, University of Colorado; David Himmelblau, Northwestern University; and Chester F. Lay, University of Chicago. General discussion of this group of papers was led by C. G. Blough, University of North Dakota.

MONDAY, DECEMBER 29, AFTERNOON SESSION

Subjects: Problems of Teaching Accountinfi and Allied Subjects; Practical Accounting Problems.

Chairman: F. H. Elwell, University of Wisconsin.

Papers by Messrs. Herman J. Peisch, President of the American Society of Certified Public Accountants; J. C. Meyer, St. John's College; Max J. Wasserman, University of Illinois; A. P. R. Drucker, Colorado College; H. W. Sweeney, Price, Waterhouse & Company; E. J. Filbey, University of Illinois.

TUESDAY, DECEMBER 30, MORNING SESSION

(Joint session with National Association of Teachers of Advertising and Marketing).

Subject: Distribution Costs.

Chairman: J. F. Pyle, Marquette University.

Papers by Messrs. H. C. Greer, University of Chicago; W. B. Castenholz, La Salle Extension University; D. C. Lowles, Member of the firm of Lowles & Akers; G. L. Harris, New York University.

TUESDAY, DECEMBER 30, AFTERNOON SESSION

Subject: Application of Economic and Accounting Theory to Practical Problems.

Chairman: President Rosenkampff, New York University.

Papers by Messrs. Eric L. Kohler, Editor, The Accounting Review; Dr. Scott, University of Missouri; W. A. Paton, University of Michigan; J. B. Canning, Stanford University.

The annual dinner of the Association was held on Monday, December 29, at 7:15 P.M. At the close of the dinner, President Rosenkampff called for reports of committees. The Secretary read the following recommendations from the Executive Committee: (1) That the $2.00 subscription rate to junior accountants be discontinued; (2) that the secretary-treasurer's report be published in The Accounting Review; and (3) that appropriations of $325.00 each to the Editor and the Secretary-Treasurer be made for services rendered in 1930. Motion was made, seconded and carried that the report be accepted and approved.

An interim report of the Committee on Research, John R. Wildman, Chairman, was read. No action was taken.

D. W. Springer, Secretary of The American Society of Certified Public Accountants, presented a copy of the Report on Classification of Accountancy Services by the Committee of his Society and a resolution of the Board of Directors of his society that a copy of this report be presented to our Association. A motion was made, seconded, and approved that the report be received and referred to a special committee to be appointed by the incoming president, and that the Secretary be instructed to send the committee of The American Society of Certified Public Accountants a vote of thanks from our Association for its report.

A letter from John R. Wildman was then read, in which he expressed the hope that the Association appoint a committee to study the problem of how a course of study, based on

the Classification of Accountancy services as presented by the American Society's Committee, may be worked out for students who are preparing to enter the professional field of accountancy. Motion was made, seconded and carried that Mr. Wildman's suggestion be followed and that the matter of a course of study be referred to the same special committee that the incoming president is to appoint to consider the report from The American Society.

Brief reports were then made by E. L. Kohler for the Publications Committee, J. B. Heckert, for the Committee on Co-operation with The American Institute of Accountants, Harvey G. Meyer for the Membership Committee, all of which were accepted by the Association.

The Secretary-Treasurer presented his report. Motion was made, seconded and carried that it be accepted.

The President's address was then read.

Just before the meeting adjourned, Professor A. C. Littleton, University of Illinois, presented the Beta Alpha Psi award for 1930 to Professor J. B. Canning, Stanford University, for his book, "The Economics of Accountancy." This award is given each year to the author of the book on accounting adjudged to be the best published during the year. Professor Canning responded with a brief talk.

At the second business meeting, which was held at four o'clock on Tuesday, December 30, Mr. Greer presented the report of the Committee on Resolutions.

E. A. Heilman made a report for the Auditing Committee.

The president then called for the report of the Nominating Committee. Mr. Paton, chairman of the committee, placed the following in nomination:

For President, R. A. Stevenson, University of Minnesota.

For First Vice-President, James P. Adams, Brown University.

For Vice-President, Howard C. Greer, University of Chicago.

For Vice-President, G. H. Newlove, University of Texas.

For Editor of THE ACCOUNTING REVIEW, E. L. Kohler.

For Secretary-Treasurer, Chas. F. Schlatter, University of Illinois.

Following the report, a motion was made, seconded and carried that the nominations be closed and that the Secretary be instructed to cast a unanimous ballot for the nominees selected.

Mr. Stevenson took the chair and thanked the members for the honor conferred upon him.

The meeting was then adjourned.

REPORT OF THE PRESIDENT

I beg to present herewith my report which must of necessity be brief, for whatever progress has been made must be attributed to the activities of the committees rather than to any special effort on my part; and since the order of business at this meeting calls for reports of committees, I shall leave it to the chairmen to inform you of the activities and accomplishments of their respective committees and shall confine my report to making a few suggestions and recommendations.

The progress of an organization such as this, is measured in no small degree by its growth in membership. This association, from its inception, has shown a steady increase in membership and this year is no exception, in spite of the fact that the year was marked by a business depression and by financial distress.

Although the results of the campaign for new members conducted by Chairman Meyer and his committee on Membership and Subscriptions are most gratifying, nevertheless these additions are largely offset by the number of old members who have resigned and the number of old members whose names have been stricken from the roll of membership for non-payment of dues. This causes me to believe that our Membership and Subscriptions Committee should be so organized as to function as a committee to retain old members as well as to secure new members.

Another suggestion I have to offer has to do with the appointment of the committee on Memberships and Subscriptions. In the past, it has been the practice of the president to appoint members of this committee by correspondence, a fact that not only makes for delay in getting the committee organized but also involves a considerable amount of clerical work. I believe better results could be obtained if at least one member of each institution represented by membership in our association and present at this meeting would voluntarily agree to serve on the Committee

on Memberships and Subscriptions, leaving it to the president to appoint the chairman and any other members he may see fit. Preferably, such a committee should be composed of at least one member of each institution represented by membership in the association.

The advantages of a Committee on Memberships and Subscriptions so organized, as I see them are, first, that it will place on those members who are in the best position to do so the responsibility of urging colleagues on the teaching staff in their respective institutions who are not yet members to join the association and of urging others to continue their membership in the association; second, that it will provide the means of conveying to all students the offer of the association to accept student subscriptions to THE ACCOUNTING REVIEW at the special rate of one dollar, a function that cannot be performed effectively in any other way, for the secretary's office is not equipped to get into direct communication with students except those who have already subscribed; third, that a member is more likely to be active on behalf of the association in respect to securing new members and student subscriptions if he is a member of the committee; and last, that it will eliminate the correspondence method which has proved inefficient and unsatisfactory.

There should be no hesitancy on the part of anyone present to offer his services on a committee so organized since his activities on behalf of the association would be confined to the institution which he serves; nor should there be any objection on the part of the incoming president to this procedure of organizing the Membership and Subscriptions Committee when it is pointed out to him that this is not an attempt to divest him of a power granted the president under the by-laws but is rather an endeavor to conserve his energies. I must confess, however, that my concern over the large number of members dropped annually for the non-payment of dues and not primarily the welfare of my successor prompts me to offer this suggestion.

Action on the matter of student subscriptions was taken at the last meeting with the understanding that it was to be an experiment and subject to withdrawal if it did not work out satisfactorily. In view of the fact that over 850 student subscriptions were received during the year I recommend that the offer be continued, but that the offer to accept junior accountant subscriptions at the special rate of two dollars be dropped as only two such subscriptions were received and we do not have the machinery for bringing the offer to the direct attention of those whom it would affect.

Another matter to which my attention has been directed is the need of a committee on co-operation with committees on education of the state societies of Certified Public Accountants and other organizations. The New York State Society of Certified Public Accountants, for example, has a very active committee on education, of which Mr. Wildman is Chairman, but we do not have at the present time a committee with which that and other committees on education can communicate. I therefore recommend the appointment of a committee on co-operation with committees on education.

I am inclined to believe that we shall have occasion, in the future, for closer co-operation with committees on education of national and state societies of Certified Public Accountants than has manifested itself in the past. I am prompted to leave this thought with you as a result of recent changes in the education law of the State of New York whereby, beginning January 1, 1938, satisfactory completion of a four-year course in a registered school of business or accountancy becomes a requirement for examination for a certificate of Certified Public Accountant. At the present time only collegiate schools of business are registered with the education department of the State of New York as they alone meet the present requirements of that department. It is interesting to note that under the law in force at the present time the only educational requirement for the certificate of Certified Public Accountant is the satisfactory completion of a four-year high school course or the equivalent.

Whether or not other states will follow the lead of the State of New York in raising the educational requirements for the certificate of Certified Public Accountant I am not in a position to say; but I do wish to point out that New York State was the first state to pass certified public accountancy laws and that every state in the Union, including insular possessions of the United States, as well as Alaska and the District of Columbia, have since enacted similar laws. That fact,

as well as the general tendency to raise the educational requirements for all of the professions in most of the states causes one to believe that similar action may be taken by other states.

In conclusion, permit me to express my personal appreciation to all those who served on committees and participated in the program and to thank you for having done me the honor of making me your president. The hearty co-operation you accorded me made what little work there is attached to the office of president most enjoyable.

A. H. Rosenkampff

Report of the Secretary-Treasurer

For the year ending December 31, 1930

On December 31, 1929, there were 621 members. During 1930, thirty-two new members were admitted while 58 resigned or were dropped for non-payment of dues, thus making a net decrease of 26 members for 1930. The total number of members on December 31, 1930 is, therefore, 595. This is not so bad as it appears at first, for we are beginning 1931 with 73 new members which will bring up the total to 668 on January 1, 1931 as compared to 636 on January 1, 1930. This apparent discrepancy is due to the fact that in 1929, 71 new members for 1929, and 15 for 1930, were secured; while in 1930 only 17 new members were secured for 1930, but the number of new members for 1931 is 73. Thus in 1930 a total of 90 new members were secured, compared to 86 in 1929.

Collections of dues have been better in 1930 than in the preceding year. In spite of the decrease in number of members for 1930, slightly more cash was collected for dues than in 1929,—$2,131 in 1930, compared to $2,100 in 1929.

The dues assessed in 1930 were, of course, less in amount than in 1929 because of the smaller number of members, being $2,380 and $2,532, respectively; but, because of the relatively larger collections of 1930, the comparisons of net income from dues, after deducting estimated losses on dues receivable, do not show such a large difference—$2,088 for 1930 compared to $2,105 of 1929.

Income from subscriptions has shown a substantial increase. Subscriptions and sales of single copies of The Accounting Review and of Papers and Proceedings amounted to $1,308.50 in 1930 and to $799.50 in 1929—an increase of $509. After adjustments for deferred income on subscriptions and for estimated loss on bad debts were made, the income from subscriptions amounted to $1,105.25 in 1930 as compared to $768.25 in 1929, an increase of $337.00.

In 1930 we received 364 student subscriptions at $1.00; 2 junior accountant subscriptions at $2.00; and 210 regular subscriptions at $4.00 exclusive of members of the Association.

Advertising in The Accounting Review also showed an increase,—being $395 in 1930 as compared to $320 in 1929.

Interest credited and accrued for 1930 amounts to $23.82. This is on the Savings Account in the City National Bank of Columbus, Ohio.

Total revenues of 1930 were $3,910.07 gross, or $3,614.57 after deducting expected losses on bad debts, as compared to $3,906.61 and $3,216.36, respectively, in 1929.

Expenses of 1930 show an increase over those of 1929 after adjusting both years to an accrual basis. The total expenses of 1930 were $3,591.94 as compared to $3,295.45 in 1929. Most of the increase was in the costs of The Accounting Review. This increase was to be expected for we cannot increase our subscriptions without some increase in expense. The magazine this year was larger and more copies were required to supply our larger subscription list. The cost in 1930 was $2,236.10 as compared to $1,905.06 in 1929. If from the respective costs of 1929 and 1930, are deducted the sums of the subscriptions earned and the advertising income in the respective years, the results are very favorable to 1930. In 1929, the excess of the cost of the magazine over the net income from Subscriptions and Advertising was $816.81 as compared to $735.85 in 1930.

The members present approved the recommendation of the Executive Committee to appropriate $325.00 each to the Editor and Secretary-Treasurer for services rendered.

Office expenses of 1930 and 1929 were practically the same, being $415.73 and $414.39, respectively. Convention expenses of 1930, based on those already incurred and paid on an estimate of those to be incurred between the time this is written and the close of the year, were $65.35 as compared to $326 for 1929. The expense of the reporter of the

discussions of 1929 meeting was responsible for the larger part of this difference.

Appearing on our Statement of Income and Expenses for the year 1930 is an item of $196.26 incurred in making a canvass of the memberships of The American Society of Certified Public Accountants and of the American Institute of Accountants. We are confident that even if but few subscriptions are received *directly* as a result of this campaign, a larger number of practising accountants than ever before have become acquainted with our magazine—an acquaintance which will eventually result in increased subscriptions.

Miscellaneous Expenses amounted to $28.50.

Cash in the banks totals $2,431.21, the largest sum the Association has ever owned as far as records are available. Of this cash, $1,624.91 is in checking account, compared to $907.82 at the same date last year. In making this comparison it must be kept in mind that the accounts payable at this time are estimated to be $638.50 as compared to $323.47 a year ago. Of the total cash, $806.30 is in a savings account, as compared to $788.48 a year ago. Our Accounts Receivable are carried at $346. The accounts receivable on the books at this time are $722 for dues, $27 for subscriptions and sales of single copies, and $122.50 for advertising, as compared to $764, $46.75 and $115, respectively a year ago. Against these receivables it was thought necessary to carry a reserve of $525.50. In 1930, the sum of $295.50 was credited to the reserve and bad debts amounting to $351.25 were written off against the reserve, leaving a balance in the reserve account of $525.50 as of December 31, 1930. The net value of the receivables is, then, $346.

Accrued interest on savings not yet entered on the pass book, amounts to $6.00. The office equipment was again valued at $12.00 in compliance with hoary tradition, thus bringing the assets to $2,795.21.

Our liabilities consist of $434.25 of deferred income from subscriptions, $184 of unearned dues (1931), and accounts payable estimated to be $1,288.50.

The $184.00 of unearned dues represents the collections from 1931 membership dues already received and recorded. Forty-six members, most of them new, have paid for 1931.

The total of liabilities known and estimated is $1,906.75, thus leaving a net worth of $888.46.

Your treasurer was at times worried about the financial affairs of this Association. The worry was particularly acute when the bank balance reached the low point of 47 cents. This low balance may be the explanation for the urgent collection letters sent out from his office. Now, at the end of the year, after considering our condition today and the additional members who begin their membership with January 1, 1931, he is greatly encouraged.

CHARLES F. SCHLATTER,
Secretary-Treasurer

REPORT OF COMMITTEE ON COOPERATION WITH AMERICAN INSTITUTE OF ACCOUNTANTS

Your committee on relation with the American Institute of Accountants has to report that it has kept in touch throughout the year with Mr. John L. Carey, Secretary of the Institute, Mr. John R. Wildman, Chairman of the Institute's Committee on education, and Mr. W. W. Nissley, Chairman of the Institute's committee on placement.

Your committee has offered the services of the Instructors' Association to further the work of the Institute and particularly of the committees mentioned.

There was published in the June issue of THE ACCOUNTING REVIEW an article containing comments on the Institute's proposed definition of "Earned Surplus," these comments coming from members of our Association.

W. J. GRAHAM
A. D. HENDERSON
D. J. HORNBERGER
J. B. HECKERT, *Chairman*

INTERIM REPORT OF COMMITTEE ON RESEARCH

The Committee on Research sent out, under date of August 19, 1930, to the entire membership, a QUESTIONNAIRE on the Treatment of Appreciation. The total membership canvassed numbered six hundred and sixty-seven. To date replies have been received from one hundred and twenty-one active members and forty-six associate members.

The replies have been neither sufficient in number nor uniform in answers and discussions to warrant any conclusions concerning

the opinion of the membership as a whole. Probably the most striking disagreement is in the matter of economic philosophy. This reminds one of a university group of Chinese students, the members of which coming from different provinces and speaking different dialects, were unable to talk with one another until they learned the common language of English.

Some who responded failed to answer certain questions because the questions were not understood. Some wrote letters, giving as an excuse for not answering that they had been unable to understand the questions. This group reminds one of a certain Ph.D. who was employed on the staff of a certified public accountant and who, when taken to task by a principal of the practical school for having made errors in addition, replied that his brain had become so highly developed that it was no longer capable of performing simple operations.

There was abundant evidence of lack of careful thought in many of the replies which were received, answers to later questions conflicting with those which had been given previously.

There was criticism of the Questionnaire in that it was said to be too pointed and to indicate bias which, it was said, is not the proper basis for investigation seeking to determine opinions.

As to the future, it may be said that the chairman at least, like the business prophets, look forward with confidence and courage. There is a wealth of material which, surveyed as yet only with the purpose of attempting to classify the replies, is bound, when studied carefully, to throw some light on the subject probably never before shed. It is hoped that there will be an opportunity during the coming year to carry on the investigation, perhaps reconciling some of the divergent views and ultimately obtaining sufficient results to warrant a complete report.

JOHN R. WILDMAN,
Chairman, Committee on Research.

REPORT OF COMMITTEE ON CONSTITUTION AND BY-LAWS

During 1928 and 1929 the Committee has brought about extensive changes in the Constitution, providing for the reorganization of the Executive Committee (Article VI) and of the Constitution Committee (Article VIII); and provision has been made for legislative enactments in the form of By-Laws (Article IV); and By-Law No. 1 has been adopted covering the matter of dues. These changes have, apparently, brought the Constitution into harmony with the accepted recent administrative practices of the Association, and seem to place the ship on a comparatively steady keel. Consequently, we have no proposals to offer this year for amendments or additions to either the Constitution or the By-Laws.

Attention should be called, however, to the possibility which exists now for the first time, of amending or adding to the By-Laws by a two-thirds vote of members present and voting. If any member desires to have such a proposal placed before the membership and will provide me as representing the Constitution Committee, with a copy of the proposal, I shall offer it for vote at the proper time in the order of business.

Three suggestions may be offered to the Editor of the Review, the President, and the Executive Committee, respectively:

1. The copy of the Constitution has one error as printed, on page 9 of the March, 1930 issue. In Article VIII relating to Committees, there still appears the sentence "subsequent appointments shall be for a period of three years," which was voted out last year. This is apparently merely an oversight.
2. The present chairman has served for three years, and the President could provide the desired continuity in this Committee by retaining one or more committee members while changing the chairmanship.
3. The Executive Committee might consider whether to formally acknowledge the co-operation already existing with the National Professional Accounting Fraternity, Beta Alpha Psi, by creating a committee on co-operation with that organization.

CHESTER F. LAY, *Chairman*

L. C. AMIDON
F. W. GRAFF
H. R. HATFIELD
W. A. PATON

Report of Membership Committee

The content of this report is divided into four sections as follows:

1. Organization of the Committee.
2. Plan of Operation.
3. Results.
4. Conclusions.

I *Organization of the Committee*

As in former years, the country was divided into districts. Twenty-four of these districts were created and a member of the Association in each district was asked to serve on the Committee.

II *Plan of Operation*

The chairman obtained copies of the membership roll of the Association and, through the device of cutting and pasting, prepared a roll classified both as to districts and as to institutions in each district. Each member of the committee was given the portion of this roll pertaining to his district.

A tentative plan of campaign was then formulated and mimeographed. This plan was prepared to aid the members in their work but not to limit individual initiative.

One of the important features of the plan involved the sending of an information request form to each institution in the district. The names and addresses of all persons giving instruction in Accounting at the institution were requested. As a result a great many names of non-members were obtained. In some districts, due to a late start, the committee member has been unable to send letters of invitation to all of these individuals.

Members of the Committee also solicited the various classes of subscriptions of The Accounting Review. Particular effort was expended in obtaining student subscriptions.

Finally, the chairman kept in close touch with the work of each member of the Committee and from time to time apprised each of the applications which were received from his district.

Thus members of the Committee had the following information on which to base their work:

1. A list of members of the Association at the beginning of the year, classified as to district and as to institutions in the district.
2. Lists of all individuals offering instruction in accounting at all institutions in the district which returned the information request sheets.
3. The names of all applicants for membership received from the district.

III *Results*

A total of ninety new members were added to the roll. Of these, seventy-three take effect as of January 1st and consequently are not reflected in the income of the current year. While many names were dropped from the roll the net effect is an increase of thirty-two. The number of members added is one of the largest in the history of the Association.

Many subscriptions to The Accounting Review were obtained but the number has not been separately set out.

IV *Conclusions*

The plan of procedure followed by the Committee seems to hold much promise. Each member has a plan to guide him and is informed of the results of his efforts.

The lists of names obtained in each district should provide a basis for further work this winter. Much effort can be spent profitably in interesting these individuals in the Association.

The chairman wishes to thank the officers of the Association and the members of the Committee for the co-operation given and the effort expended in this campaign. It has been a real pleasure to work with them at all times.

Harvey G. Meyer,
Chairman, Membership Committee

Report of Committee on Resolutions

"Resolved, that the members of this Association hereby express their appreciation of the services of the officers and committees of the Association during the past year, and extend their thanks to those whose co-operation in the program at this meeting has rendered it interesting and valuable."

This resolution was unanimously adopted.

"Whereas, it is important to the management of American commerce and industry and to the advancement of American well-being and prosperity that complete and accurate information be generally available concerning the profits or losses sustained by American business in its various divisions, and concerning the extent of the investment in various types of business and the rates of return on

this investment represented by the profits or losses realized, and

"WHEREAS, information necessary for a comprehensive analysis of profits, investment, and rate of return on investment is contained in annual income tax returns filed by corporations and individuals with the Bureau of Internal Revenue, and

"WHEREAS, the Bureau, if given proper authority and the necessary appropriations, could make available, through statistical analysis of these income tax returns, a wealth of information of great value to economists, statisticians, accountants, research workers, legislators, public officials, business men, and the public generally,

"THEREFORE, BE IT RESOLVED, that this association hereby recommends to the Bureau of Internal Revenue that its present excellent analysis entitled 'Statistics of Income Tax Returns' be continued, and also that this analysis be expanded to include an analysis of balance sheets as well as earnings statements, with appropriate comparisons between significant features of earnings statements and balance sheets, and

"BE IT FURTHER RESOLVED that the Congress of the United States be requested to appropriate the sums necessary to make such analysis possible, and to direct that the work be done each year and results made public as early as possible, and

"BE IT FURTHER RESOLVED that the secretary of this association be instructed to send copies of this resolution, with appropriate explanatory comment, to the Commissioner of Internal Revenue and to the Chairman of the appropriate committees of the Senate and the House of Representatives of the United States; and that the secretary also be directed to request the support in this move of such organizations as the National Bureau of Economics Research, the National Industrial Conference Board, the Chamber of Commerce of the United States, and any other organizations which may be interested."

H. C. GREER, *Chairman,*
Committee on Resolutions

[After presenting the second resolution, Mr. Greer explained that the matter had also been brought before the American Economic Association and the American Statistical Association, and that it was the wish of representatives of the American Economic Association that action on the resolution be deferred pending completion of certain studies now being made in this field at the instance of the National Bureau of Economic Research. Members of the Bureau believe that publication of the report on the investigation now being made will stimulate interest in the subject and make it easier to obtain action on the proposals, to which they are entirely favorable. Mr. Greer therefore moved that the resolution be received and laid on the table pending further developments in the study mentioned, and that the president of this association be empowered to appoint a representative to serve on a joint committee of the various associations interested, in case it is considered desirable to organize such a committee at a later date. This motion was seconded and carried.]

REPORT OF AUDITING COMMITTEE

We have examined the accounting records of the Secretary-Treasurer of the American Association of University Instructors in Accounting and wish to report that, in our opinion, the attached Statement of Income and expense and the Balance Sheet, respectively, properly reflect the financial operations for the fiscal year ended December 31, 1930, and the financial condition of the Association as of that date.

(Signed) S. G. WINTER
E. A. HEILMAN

BALANCE SHEET—DECEMBER 31, 1930

ASSETS

Cash	$2,437.21
Receivables (net)	346.00
Office equipment	12.00
Total assets	$2,795.21

LIABILITIES AND NET WORTH

Accounts payable		$1,288.50
Unearned income—Dues and subscriptions		618.25
Net Worth:		
Balance—December 20, 1929	$865.83	
Net income—1930	22.63	888.46
Total liabilities and net worth		$2,795.21

STATEMENT OF INCOME AND EXPENSE
YEAR ENDING DECEMBER 31, 1930

Income:		
Dues (net)	$2,088.00	
Subscriptions (net)	1,105.25	
Advertising	395.00	
Interest on bank balances	23.82	
Miscellaneous	2.50	
Total income	$3,614.57	
Expense:		
Magazine	$2,236.10	
Compensation to editor and secretary	650.00	
Office supplies and expense	415.73	
Subscription campaign	196.26	
1930 convention	65.35	
Moving expense	28.40	
Exchange	.10	
Total expense		$3,591.94
Net income		$ 22.63

BOOK REVIEWS

Economic Rhythm, A Theory of Business Cycles. Ernst Wagemann. (New York: McGraw-Hill Book Company, Inc. 1930. Pp. xvi, 287. $3.00.)

Beginning with a brief statement of the origin and development of "business-cycle theory" the author of this excellent work carries the reader through a characterization of "economic fluctuations" in general, an outline of the phases of the business cycle, including descriptive comments on the important crises of the nineteenth century, a discussion of the types of relations exhibited by cyclical movements, an account of the construction and use of business barometers, with special reference to the work of the German Institute for Business Cycle Research, and a survey of the problems of interpreting, forecasting, and controlling general cyclical movements. The material is well-organized; the style throughout is lucid, succinct. The book is well annotated, and includes a valuable bibliography. The illustrative material, including the appendix of "significant statistical series," is drawn largely from German economic and business data.

Like many contemporary writers Dr. Wagemann scorns the abstract theorizing—"the trembling denizen of the professor's study" which "shrinks in terror from anything so rude and coarse as mere figures"—to which, in his view of the case, economists have been so widely and unwisely addicted. In lieu of the "pure theory" approach he adopts the "organic-biological principle" which assumes that the economic system is a "living organism" of intimately interdependent functional parts having "the power to regulate its own movement," a power which "has its immediate expression in an interplay of forces which is anything but mechanical."

"The starting, the direction, the duration, and the intensity of an organic series of movements . . . possess the character of a more or less free rhythm, in contrast to the strictly regular beat of a machine. The independent organic character of economic fluctuations is . . . particularly noticeable in the manner in which they receive outside influences; they stand up to such influences and transform them, so that the latter's effect is merely that of stimuli."

There are those who will feel that in this connection the author is engaged largely in flattening a man of straw and that he makes too much fuss over what is generally recognized as a very commonplace point of view. However, this aspect of the work, although rather annoying, does not detract materially from the merit of the body of the book, in which the discussion is on the whole temperate and well-balanced.

The author classifies the forms of economic movement as follows:

1. Isolated structural changes.
   a. Discontinuous changes (changes involving a break in the course of development).
   b. Continuous changes (fundamental organic movement).
2. Periodical fluctuations.
   a. Fluctuations occurring in a fixed rhythm (seasonal fluctuations).
   b. Fluctuations occurring in a free rhythm (business cycles in the strict sense).

The results of the cession of German territory at the close of the war are "discontinuous structural changes." The marked increase in industrial production in the United States in recent years (ignoring the present depression) may be an example of a "continuous structural change," an "organic transformation." Seasonal fluctuations include all "periodical movements tied down to fixed chronological terms and owing their origin to the fact that economic processes and activities are distributed over the year in a definite order of time, just as the times for meals are spread over the day." These fluctuations are "artificial" when based on custom, regulation, etc., and are "natural" when based on meteorological factors. Both types of seasonal fluctuation are subject to alteration. To illustrate this point the author calls attention to the effect of currency inflation in Germany on many types of seasonal fluctuation. Business cycles (or fluctuations occurring in a free rhythm) are—negatively defined—those cyclical movements which remain after all seasonal movements have been eliminated, or—positively defined—those movements which take place in a planless fashion, on no strict chronological basis, and lead to "situations of tension and difficulty which urgently require solution." Business cycles are disturbances in the "state of equilibrium" which "lead to a corresponding deviation in the opposite direction or, in other words, proceed in accordance with the law of reaction."

Dr. Wagemann distinguishes sharply between the business cycle proper, with a duration of from seven to ten years, and the long-wave economic movements of which there appear to have been several in the century preceding the World War. The author is careful to point out, however, that these long-wave price movements, each of from twenty-five to thirty years in length, have not been satisfactorily explained, although they appear to have some connection with the major wars of the past century.

In Chapters VII-XI the author discusses the nature of cyclical positions and cyclical tensions, and types of relations between cyclical movements (parallel and "radiatory" fluctuation, sequence, counter variation or scissors movement). Chapters XII-XIV are devoted to a survey of business

barometers. The chief point emphasized in this connection is the author's view that "the movement of business can be neither adequately estimated nor correctly understood so long as we rely solely on some single formula, even though that formula be based on a wealth of statistical material," and that what is needed is a "regular system of economic barometers." In Dr. Wagemann's opinion the plural-curve barometers, such as those of the Brookmire and Harvard services, have definitely failed to prove themselves of value. In Chapters XV-XIX the "interlacing of specific fluctuations" is concretely considered. In this group of chapters particular attention is given to the relation between cyclical fluctuation in agriculture and industry, the rhythm of foreign trade, credit cycles, prices and turnover. The author reaches no startling new conclusions and freely admits that our knowledge of cyclical relationships, particularly with respect to causal aspects, is still very imperfect. Among the numerous interesting suggestions in this part of the book is the question raised as to the validity of price movements as indicia or guides to business fluctuations, particularly in view of the extent to which price-fixing in one form or another has been developed.

The diagnoses and forecasts of the German Institute for Business Cycle Research have thus far been sufficiently substantiated, according to Dr. Wagemann, to justify a reasonable degree of optimism with regard to the development of forecasting in general. In this connection the importance of an examination by the forecasting agency of the plans and views of individual enterprises, particularly in the form of orders booked, raw material imports, statistics of engineering industry, borrowings, etc., is stressed. Only a couple of pages are devoted to "private business forecasting" and the importance of the development of accounting and budgeting in this field is barely mentioned. With respect to the control of the business cycle the author calls attention to the familiar devices of controlled credit policy, wage and price agreements, unemployment insurance, governmental relief projects, private building activity, and rational planning by entrepreneurs generally.

The book concludes with a brief classification of the various theories of fundamental causes of the business cycle. The author appears to feel that "gravitation in the world economic order" brought about by the structural differences between the various national economic systems—particularly with regard to degree of industrial development—is an important aspect of the situation. The lay reader is likely to be as satisfied with the relatively simple suggestion that cycles are fundamentally a matter of varying meteorological conditions coupled with the fact of mob psychology and the inherent instability of any particular state of mind. Such a reader is also likely to be reminded of the fact that the phenomenon of fat years and lean years antedates the development of modern industry.

Assuming that the translation is accurate, the reviewer cannot forbear raising a question as to Dr. Wagemann's understanding of double-entry bookkeeping. In speaking of the circulation of payments, on page 48, the author says: "The notion of the double stream of payments is and always will be no more than a metaphorical figure, which at best reflects the course of payments in a national economic system in the same way as double-entry bookkeeping reflects the course of business in a commercial undertaking, namely by the aid of dummy entries." Many accountants will not agree with this implied characterization of the double-entry system.

W. A. Paton

C.P.A. Review and C.P.A. Answers and Solutions. Sidney G. Winter. (New York: Prentice-Hall, Incorporated. 1930. Pp. xiii, 556 and 768.)

Professor Winter's "C.P.A. Review" is "intended to afford a comprehensive review of the principles of accounting and to provide training in the application of these principles to specific problems. It is designed to be of service both as a text for classroom use and as a guide to those individuals who are studying privately prior to their sitting for the C.P.A. examinations."

The book is divided into eleven sections which deal respectively with partnerships; corporations; actuarial science; financial statements; auditing; cost accounting; insolvencies, receiverships, and liquidations; consolidations, mergers, and holding companies; estate accounting; governmental and institutional accounting; and miscellaneous problems. Most of the sections are separated into three or four parts. Each section or part of a section begins with a short list of references to standard works. Then follows a list of questions with specific citations to the references. In the whole book there are nearly five hundred such questions. Next we have questions and problems bearing upon the same subject matter. Three hundred seventy of these questions and problems appear in the book, two hundred twenty-two of the questions being taken from C.P.A. examinations. Finally each section concludes with examination problems set by fourteen states, the District of Columbia, the American Institute of Accountants, and others. There are one hundred sixty-five of these problems.

It is apparent that Professor Winter has provided an abundance of material by means of which students may be adequately prepared for the C.P.A. examinations. He presents his material in a clear, interesting style. The publishers have produced a book of which they may justly be proud; the type is good and the paper and general appearance are inviting.

In the second volume Professor Winter has presented his answers and solutions to the three hun-

dred seventy questions and problems mentioned above and his solutions to the one hundred sixty-five C.P.A. examination problems. It is, of course, impossible for the reviewer to check all of these answers and solutions. Tests of a few of them, however, convince him that Professor Winter has done this work in a careful, thorough manner.

ARTHUR W. HANSON

1931 *Tax Diary and Manual.* (New York: Prentice-Hall, Inc. 1930. Pp. 240—manual, Pp. 416—diary. $6.00)

The Tax Diary and Manual prepared by Prentice-Hall, Inc. consists in the first section of a digest of the income, inheritance, estate, corporation and other tax laws of the forty-eight states of the United States, the Federal government and the District of Columbia. This digest emphasizes the important features of these tax laws and is supplemented by charts which furnish convenient references and comparisons.

The second section of this book is primarily a diary but, in addition to the usual space for memoranda for each day, there is a most valuable daily summary of the taxes, reports and other requirements of the forty-eight states of the United States and of the Federal government. This "daily tickler" on tax requirements is a most valuable feature.

In the preparation of this manual and diary it is quite evident that every effort was made to produce, not only a comprehensive summary of the innumerable requirements of the Federal and State governments, but also to produce it in such a way that it would be of practical value to accountants, lawyers, corporation officers and to all who assume the responsibility of making reports in accordance with the laws. To salesmen of investments, to accountants, to lawyers, to trustees, to executors and administrators, and to corporation officers this Tax Diary and Manual can be of considerable service and to one whose work brings him into contact with the manifold requirements of the Federal and State governments it should save in the course of a year many times its cost.

JAMES V. TONER

The Theory and History of Banking. Charles F. Dunbar. Fifth edition, revised by O. M. W. Sprague. (New York: G. P. Putnam's Sons. 1929. Pp. viii, 319. $2.00)

This is the fifth edition of a famous classic which first appeared in a preliminary edition under the title *Chapters on Banking* in 1885. In the fourth edition, the chapter on the Federal Reserve System was written by Professor H. P. Willis; the present revision, like that of the second and third editions, (and contrary to the announcement on the title page) represents entirely the work of Professor O. M. W. Sprague.

The book affords probably the best concise statement of the essential principles of commercial banking and of foreign exchange. The second half of the book contains chapters on the English, French, and German banking systems, our National Banks, and the Federal Reserve System. These chapters are largely historical, but they constitute history with a clearly defined analytical purpose.

Changes have been made throughout the book. In view of the historical emphasis, discussion of the World War and its consequences does not bulk very large. The major legislative changes incident to the War are duly indicated. Aside from these Professor Sprague believes that the alteration in the relative position of the leading countries in international finance is the only important change introduced by the War. The War has also substantially altered, for the time being at least, the workings of the gold standard. Debtor countries are making vast shipments of gold which the creditor countries, to avoid domestic inflation, must largely impound. This works against the effective employment and distribution of monetary gold, and disturbs the behavior of leading money markets.

It is fitting that this book, intended for use in conjunction with other reading, should be confined to its original purpose—that of covering in a compact manner the minimum essentials of a narrowly defined field. Other books must furnish significant material and extensive discussion that lie outside the scope of these chapters. For supplying this want no one is more admirably fitted than Professor Sprague, and we may well hope that he will some day give us a more comprehensive statement.

HARRY E. MILLER

1931 Credit Manual of Commercial Laws with Diary. (New York: National Association of Credit Men. 1930. Pp. 559.)

This book is a legal digest of invaluable assistance to anyone interested in, or responsible for, any or all phases of the broad field of credit. Credit men, naturally, will find the volume of especial interest.

This manual, the 1931 edition, is a comprehensive digest of present-day commercial law dealing with credit matters. The rights and obligations of debtors and creditors under various circumstances are fully presented, not only as to general law, but also with respect to the specific law within each state of the United States. Chattel mortgages, for instance, are discussed as an instrument of credit on pages 66-68; the meaning, the procedure, and the cautions to be observed, with respect to chattel mortgages are explained; this exposition is in turn followed by a digest of the principal points of chattel mortgage law for each of the states. In Ohio, for example, it will be noted that a recorded mortgage is valid for three years; in New Jersey there is no time limitation.

It is not possible to present within the scope of this review all of the material embraced by this credit manual. Indicative, and also of especial interest, are the sections dealing with bad checks, the various kinds of liens, the liability of banks in their sundry relationships with customers, sales in bulk, and illegal trade practices.

The United States and Canadian Bankruptcy Laws are printed in full; while the Uniform Sales Act is given in summary form.

Pages 358-98 illustrate a variety of business forms purchasable from the National Association of Credit Men. This section is a valuable one for it exemplifies specifically just what the content of a note, guaranty, release, or any usual business agreement, should be in order to render such instrument effective, as well as legally sound and secure.

Pages 399-426 embrace miscellaneous bits of information primarily intended for credit men. Pages 427-510 is a "Credit Men's Diary" with space for each date of the year for notations of individual interest. On pages 511-17 is a "Reader's Guide" summarizing briefly all the points to be watched in a business transaction from the time the order is received until it is finally disposed of.

Accountants and auditors, as well as credit men, can use this volume to advantage. On page 188 it is noted that a stockholder in California is liable pro rata for all debts of his corporation; on page 126 it is noted that, in Virginia, where a contract form is furnished by the vendor, the contract may be modified by collateral or verbal agreement, unless the order, or contract, form prohibits such modification "by a separate paragraph set up in at least pica type." Obviously such provisions indicate to accountants and auditors, who are peculiarly interested in correct financial statements, the necessity of familiarizing themselves with the credit law applicable to the state in which they do business.

A bare "Primer of Bookkeeping" is given on pages 52-62. An effective insistence on adequate books of account, and the value of independent audits, would have strengthened the Credit Manual considerably. Since adequate books of account represent a fundamental of effective credit administration, it is unfortunate that this point has been given such inadequate development and attention. It is recommended that future editions of the Credit Manual give this point the emphasis it deserves.

ARNOLD W. JOHNSON

Corporation Finance. Sixth Revision, revised and enlarged. Edward S. Mead. (New York: D. Appleton & Company. 1930. xxv, 703. $4.00)

This volume has been revised six times since it was originally written in 1910. The author through his revisions has kept it up to date, the last revision previous being in 1928. This text deserves the place as one of the leading texts in this subject.

The book is divided into two main parts. Part I deals with the promotion of corporations, the materials of the financial plan, i.e. stocks and bonds, a description of the sale of securities and the underwriting syndicate. The financial activities of the corporation are next described, followed by a full discussion of the determination of profits, including maintenance, depreciation and replacement funds. The management of working capital and a distribution of profits and surplus in dividends completes Part I.

Part II deals with the subjects of expansion and reorganization. The necessity and advantages of promoting new capital, the various sources of capital, such as reinvesting profits, sale of stock and bonds, consolidation, and the conditions under which each should be used are treated. Following is a complete discussion of the advantages of consolidation, both vertical and horizontal; the financial motives, methods of consolidation, the lease, the holding company and the holding company's part in restraining trade. The book concludes with a treatise on the reconstruction of corporations. Reorganization by court order, receivership, reorganization without foreclosure, and the reorganization of insolvent corporations are the main subjects dealt with in this section of the book.

The text is one primarily for the use of advanced students in corporation finance. In his revisions the author admits that in each revision he has eliminated material in corporation law, banking and accounting in order to make room for discussion of the new phases of the subject. The author therefore, does not attempt to define some of the more elementary terms which should have been learned in prerequisite courses.

The discussion of the various classes of stocks and bonds has been worked out very well, each type being defined and the use of each one in the corporate structure explained.

The determination of profits, the treatment of depreciation, and the distribution of profits are probably the most interesting chapters to accountants. The author shows in the main a good knowledge of accounting in treating these subjects. It is the reviewer's opinion that this is a distinguishing feature of the book, as the authors of so many books on this subject show the lack of accounting knowledge.

In this edition a new chapter appears on the voluntary reorganization of insolvent corporations with court action. By getting the creditors and stockholders to agree to a reorganization with foreclosure, great expense and time can be saved.

The book as a whole is well organized and illustrated. Numerous illustrations are given to bring out points and in addition make the book interesting reading. The text will continue to enjoy the high standing which the previous editions have enjoyed.

WAYNE F. GIBBS

Rudiments of Business Finance. Edward Sherwood Mead and Karl W. H. Scholz. (New York: D. Appleton & Company. 1930. Pp. xiv, 307.)

This is a shorter and more elementary treatise on the subject than the larger volume by Mead, entitled "Corporation Finance." This text was written as an introductory course in business finance for students who have not had the preliminary courses in accounting, banking and law. This text is much briefer and fewer illustrations are used.

The main divisions of the book are the form of organization, the various types of securities, means of marketing securities, provision of working capital, determination of income and its distribution, financing of business expansion, government regulations of corporate activity and the failure and reorganization of business enterprises.

As this book is more elementary, more discussion is given to the legal and accounting aspects of the subject. Business men will probably prefer this book as it deals with the problems which are common to the small business as well as the large and it is not necessary to go through the wealth of material which is in the larger book. A great deal of the material which is in the larger volume is included here in abbreviated form. Very little attention is given to promotion; the treatment of the various classes of securities is necessarily briefer and much more elementary. Practically nothing is said regarding consolidation. A very complete discussion of corporation profits and their distribution is included in this volume.

As a brief text on finance for the more immature student this volume can be recommended.

WAYNE F. GIBBS

Certified Public Accountant Laws of the United States. Compiled by the American Institute of Accountants. (New York: The Century Company. 1930. Pp. viii, 247. $3.00.)

At the present time every State and Territory of the United States has a law regulating the certification of public accountants. In this book there are presented the complete texts of all of these laws. Marginal notes are provided to facilitate ready reference. This is the only available collection of this sort. ARTHUR W. HANSON

University and College Accounting. By Lloyd Morey. (New York: John Wiley & Sons, 1930. pp. xi, 323. $6.00)

Almost the first thought that comes to mind on reading the title given above relates to "the budget system." Only a small fraction of the various organizations in this country operate under a budget; probably but a small fraction of institutions where accounting is taught devote an appreciable amount of time to a discussion of this method of handling funds. Hence this book has rather a limited field.

As Mr. Morey does not state specifically for whose benefit, in the main, the book was written, it may be assumed that his intention was that the book should be found on the desk of the financial administrator of a college or university, and, further, that it be pored over as a text by the college or university student. Too detailed a presentation, therefore, would bore the financial officer; too brief a portrayal of the intricacies of a budget system, especially when applied to the many ramifications of university activities, would bewilder and confuse even the ambitious undergraduate. The balance of values, the niceties of authorship, the skill of a writer are all put to the test in such a project.

Assuming, first, that the author aimed to furnish the financial officer with a book to be placed, open, on the desk, his aim was true. The fundamental features of university accounting have been clearly and concisely set forth; such phases of university activities as are in many institutions not too well handled (e.g. purchasing methods) have been subjected to most admirable treatment; forms for reports, and sub-systems for the branch activities (e.g. athletics, trading in agricultural products, operation of printing shops, etc.) have been adequately discussed either in some nine or ten appendices or in the main body of the book.

Assuming second, that the author's aim was also to furnish a text for the student, commendation is still due him, but with some restraint.

A student already in command of the fundamental principles of accounting and confronted by a special phase of the subject as to practice is in position, first, to receive a general view of the system in use or of the system recommended; then he should be given the material necessary for an analysis of the finer details of the entire structure, and, finally, he requires a comprehensive summary. Now the author so proceeds. Possibly this construction of the subject matter leads me to believe that the book was intended to be used as a text.

The general view contains the function of the accounts peculiar to institutional practice, plus a few of the more common accounts necessary to round out the view. The analysis deals with the entries for representative transactions supplemented by forms that have been in use in actual practice, and is further enriched by a reasonably detailed discussion of procedure. The summary presents, in the form of journal entries, the debits and credits for most, if not all, of the usual transactions of a university having far reaching activities.

Now then, the general view of the system is a trifle weak, not in what it presents, but rather in what it omits. To take just one instance: transaction No. 11—Loss on Bad Debts—is revealed as a credit to Accounts Receivable and also as a credit to Estimated Income. Both corresponding debits are missing. One of them, the debit to the Re-

serve Account, is justifiably omitted; but the other should be given, as Estimated Income is a budget account, and the handling of budget accounts seems to be an essential part of what we are supposed to get within our vision. Even the summary doesn't help us on this item.

In the detailed analysis many forms are given —given, presumably, to be studied or examined. However, the print is so small in many of them that they become almost useless for the reader unless he has a magnifying glass available. (Not an adverse criticism of the author, but a hint to the printer.)

The summary is very satisfactory, save that if the same entry numbers had been used in the general view as were used in the summary a touch of perfection would have prevailed throughout which could do no other than act favorably upon the uninitiated but anxious-to-learn type of student.

The appendices, referred to hereinbefore, enhance the value of the work. The "hoped-for" standard forms of reports are concise and clear; the discussion of branch activities excellent.

The general impression that one gets from the whole book is that here is a hard job well done.

ALBERT J. BARLOW

Patent Accounting. B. L. Klooster. (New York: Prentice-Hall, Inc. 1930. Pp. 795. $15.00)

This is a genuine contribution to accounting literature. It bestrides that border line between law and accounting with which many lawyers and many accountants must at times come into contact. The general structure of the book may be indicated by saying that the first 120 pages are devoted to a statement of the legal steps leading up to the point at which an accountant may begin his examinations for the purpose of determining how much should be paid by an infringer to the plaintiff; the next 180 pages deal with the treatment of specific items of expense in such accounting; then come 200 pages of discussion of the various bases on which the courts have awarded compensation to injured parties. An appendix of about 180 pages contains citations from eighteen leading court decisions dealing with these matters, an accounting problem, and its solution. Looking at the Table of Contents a reader might suppose he had an accounting book in hand; looking at the typical printed page he will realize at once that he is reading a law book, with constant rules of procedure, court decisions, and citations thereof.

In a brief and modest preface the author states that his intention is "to simplify accountings for infringements," and "to simplify the course of justice in patent accountings"—objectives with which all good citizens everywhere will be in hearty accord. Nor can it be contended that such attempts are unnecessary; here, as in other branches of law, the layman is constantly bewildered by the conflict of decisions and arguments about jurisdiction (pages 108ff.). This confusion extends right down into the accountant's own work. We are told (page 70) that "he (the accountant) may not cure a defendant's default by argumentative accounting, nor reform books in accordance with his opinion of what should have been entered." But next we are told (page 117) "for this purpose it was in his (the accountant's) power to write up the books, to correct errors discovered, and make entries of what had been omitted by oversight or mistake." One can easily imagine that the lawyers would reconcile these opposites by drawing a distinction between specific errors with individual transactions which may be corrected, and the general accounting treatment of large masses of data, such, for example, as is involved in distinguishing between capital and revenue charges, or in apportioning various types of overhead, which may not be tampered with. Yet every accountant knows that far larger and more serious errors can occur in the latter category than in the former. What is more, the courts themselves have always been very ready to criticize accounting treatments of these larger matters whenever they have seemed unreasonable. It seems impossible that the courts will be able to continue to utilize accountants in work of this sort, and yet deny them the right to exercise their judgment, and to contribute that judgment as part of the evidence. The reviewer realizes that in saying this he may be getting into dangerous ground concerning the legal distinction between the ascertaining of facts, and the opinion testimony by experts, but these distinctions cannot in the long run be allowed to obscure plain common sense.

One thing about this book which will gratify the accounting reader is the author's sympathy with accounting viewpoints, and his belief that accountants can contribute very much to the solution of these problems. He is frank to include (page 94) among the causes of delay and protraction in infringement procedures "the lack of special training in accountancy by the lawyers and judges who determine accounting questions." Something of this has long been suspected by accountants, but they recognize that they can do little about it; not until lawyers themselves come to realize the significance of accounting data will substantial forward steps be possible.

The accounting reader will tend to be bewildered in places by the author's use of the word "accounting," as for example, (page 92) "many accountings have required more than five years," until he realizes that the author by this term has in mind the entire legal machinery for setting an inquiry on foot, execution of the inquiry (which is primarily an accountant's work in the strict sense, but may be accompanied and delayed by legal steps concerned with procedure for the hearing of evidence) and the final hearing of the report, with a possibility of exceptions being taken thereto. This contrast is further brought out by

the remarks (page 135) about accounting considered as a branch of the study of evidence of procedure and accounting as it is commonly understood in business. Here again the layman realizes that accounting findings and evidence must go through the legal sieve to determine their weight and competency; but one suspects that something more than determining its weight and competency may sometimes happen to accounting evidence going though this process.

Broadly speaking the legal rules which have been assembled for the purpose of determining compensation to be paid by an infringer accord pretty well with accounting principles as known to accountants. A number of modifications occur, some of them reasonable in view of the object sought, while others will strike the accountant as curious. The three bases on which this compensation may be awarded are: (1) profits made by the infringer through his illegal use of the patent; (2) the damages suffered by the owner of the patent through loss of sales; (3) a reasonable royalty computed on the number of units produced by the infringer. In all of these it would seem that the accountant might contribute usefully, though it is on the first two bases that the courts have been most disposed to seek the assistance of accountants.

It is when the infringer's cost of production comes to be studied under the first basis for determining compensation, that the accountant will find matter of peculiar interest. The tendency of the courts seems to be to play safe and to interpret "cost" as literally as possible. As applied to materials used, it seems they must be charged in at the actual cost, with no increases under the guise of current market or average cost, which might tend to give the infringer a profit on his materials which would not be included in assessing his liability. This may be reasonably easy to work out, though one suspects that when it comes to dealing with inventories the rule might not avoid all the difficulties. The inquiry gets into deeper water with labor costs; idle time is not to be allowed as a deduction, and (page 139) it is the infringer's duty to keep men fully occupied if he uses them at all. This is a high level of managerial and cost attainment to which all manufacturers wish they might reach.

With overhead the courts are suspicious of any lumping together of expenses (page 160); they like to have these listed by specific items. They recognize the necessity of apportionment, or burden distribution, as it is commonly called in accounting; but they seem to have the impression that some items apply strictly to the general business as such, and should not be apportioned. "While the usual and reasonable salaries of such portion of the managing officers as have concern with the infringing business are to be allowed, the items of taxes, insurance, and use of real estate owned by the infringer are not a part of general expenses." (Page 161) The general result issuing from this ruling may be seen from the fact that in a factory where the overhead averaged 26%, only 10% was allowed on the department in which the infringement took place, with the effect, of course, of augmenting alike the infringer's profits from the infringement, and his liability. With regard to burden rates the courts have heard about, and have accepted, the percentage on direct materials and labor combined, and also the percentage of labor cost alone; there is no sign that they have yet encountered the machine-hour rate in any form.

Some curious contrasts occur with experimental expense. "Experimental expense (page 200 is generally not a proper deduction, its disallowance being on the ground that it has no necessary connection with the infringing sales." But then again (page 201) "In a New York case the deduction of royalties 'for devising the very infringement in suit' was allowed as being chargeable against the infringing profits." The latter case is explained by the statement that the inventor did not know that he was copying the patented article; the course called this "a little thin," but allowed the expenses nevertheless.

The entire Chapter XL consists of the following: *"Installation Charges.* Installation charges were allowed as a deduction in a Massachusetts case." That is, of course, an item which in ordinary accounting would be capitalized, and not charged against income.

Those who like to argue about interest on investment can derive much joy from Chapter XLII, which will furnish support for any point of view they may wish to embrace. Some very respectable decisions consider (page 224) "that the infringer is entitled to deduction from the profits for use of its capital (including plant) invested in the business," and "That it should be so allowed in any attempt to arrive at profits seems too clear for discussion." This is something like the proviso that the steam railroads of the country are *entitled* to 5¾% return on their investment; what we would all like to see would be some machinery that would insure that they get it. Something like this is perhaps in the minds of the courts making those decisions which decline to allow interest, saying "it would amount to a species of profit."

T. H. Sanders

Overhead Expense. A. Hamilton Church. (New York: McGraw-Hill Book Company, Inc. 1930. Pp. viii, 418. $5.00)

One familiar with the former writings on overhead of A. Hamilton Church, namely "Proper Distribution of Expense Burden" and "Production Factors" is aware that the author endeavored to establish a definite nomenclature in the treatment of overhead. The author points out in his note to the preface of his new book that terms, such

as, production factor, production center, supplementary rate, etc., "have been borrowed widely and applied to uses" which he had never contemplated, and which he believes have little relation to their original significance. Because of this fact and partly because better terms can be substituted the author in his new book has substituted the term "service factor" for his old term "production factor," and in most instances the term "process" for "production center." Although the present book has a slightly different point of view, it is for the most part an elaboration of the two books above mentioned.

The book is divided into five parts whose captions are, in the order of appearance: General Discussion of Overhead Expense, Relation of Standardized Overhead with Production, Practical Determination of Service Factors and Process Rates, The Control of Standardized Overhead and Costs, Sales, and Profits. There are forty-four chapters and with the exception of a few, each chapter concludes with a summary which aids the reader considerably in crystallizing his own ideas of the content of the chapter. In addition, each chapter has, in the reviewer's opinion ample illustrations, examples, and charts. The book, however, does not contain any problem material which might prove to be a slight handicap for those considering the book as a possible text.

The first part of the book contains a general discussion of overhead with home historical considerations, gradually developing the idea of service as being the determining criteria as to whether an expenditure has a position in manufacturing costs or not. It is clearly pointed out that with the further use of machinery in production it becomes more necessary to develop a process dollar instead of depending on the older methods of using direct labor costs as a basis of charging overhead. In further considering the process dollar, attention is directed to the distinction between work and the capacity for work, for the plant, to at least a reasonable extent, must be kept in condition to handle work whether work is available or not. Although the cost of maintaining the various services is commonly merged in overhead, the author believes that the cost of each service or group of services should be kept separate and distinct according to process. If this is done it is possible to allocate to each process its proper share of service costs so that the total of these for any process divided by the number of hours would give a process rate. To illustrate how this allocation would work in a large plant where many processes are housed, the author first considers a small shop with a single process, after which attention is given to the large plants, they being considered as a consolidation of the small shops. The reviewer questions the advantage and soundness of the comparison of the consolidation of small shops with the large plants.

In part two of the book, attention is directed to the relation of standardized overhead with production as it more especially relates to the influence of idleness regardless of whether such idleness is temporary or permanent. In addition, the three variables in costs, namely, time of processing, direct wage rates and the process rate are considered along with the possibility of standardizing them. Time and motion study as it relates to the process of standardization is discussed as well as various methods of wage payment plans. Other matters considered are the influence of increased production upon costs, the seasonal tendencies of the business and their effects and the treatment of intermittent expenditures. Under the caption of standardization of overhead expenses and service factors attention was given to the following items: land—building factors, power factor, supervision factors, storage—transport factor, production equipment factor.

The next part of the book as indicated by its title directs attention to the Practical Determination of Service Factors and Process Rates. The first eight chapters in this part consider in detail the time basis and each of the service factors mentioned above, particular reference being made to their determination, composition, and treatment. The balance of the chapters in part III refer to such matters as the determination and treatment of Special Service Factors, Repairs and Maintenance, Auxiliary Equipment and Building, the Process Rate in Single-type departments and Plural-type departments.

Since the first three parts of this book develop the thesis of service factors and process costs in all its ramifications, it is natural for the fourth part of the book to direct attention to the control of Standardized Overhead. As the author points out the "successful connection of overhead with the costs of jobs or units of product depends on adequate recognition of the principle . . . that overhead is expenditure incurred for the maintenance of plant in a state of preparedness to do process work. . . ." As the chief purpose of having standardization is to measure operating activity, real control of standardized overhead must necessarily be to the greatest extent centered about variations from the standard. The major portion of this part of the book considers the five chief types of variations, namely, Variations in Capacity, Variations in Annual charges to each factor, Variations in intermittent expenditures, Variations in the amount of capacity utilized and Variations in the cost of hourly wage items. The last two chapters deal with control through Burden Account Balances and Wasted Capacity Ratio—Supplementary Rate.

Part five considers some problems of Costs, Sales, and Profits with special reference to the Interpretation of Costs, The Fixing of Prices, Estimating and some Special Problems, such as, Class

Burden, Bonus Payments, Spoilage and Waste, The Occasionally Used Machine, Processes with Two Process Rates, Standardization and Classification of Selling Expense and its relation to manufacturing.

P. B. COFFMAN

Cost Finding for Engineers. Charles Reitell and Clarence Van Sickle. (New York: McGraw-Hill Book Company, Inc. 1930. Pp. viii, 518. $5.00)

The Accounting Review for September, 1930 carried two articles of interest in connection with the present review and the work under review. These articles are "Teaching of Accounting in Schools of Engineering" by James C. White, and "Accounting in the Engineering Curriculum" by R. A. Stevenson. Professor White indicates three objectives in a course in accounting for engineering students, these being: acquaintance with fundamental accounting operations; consideration of the principles of cost accounting and consideration of managerial uses of records. Dean Stevenson cites a report to the Society for Promotion of Engineering Education which recommends a reduction in the time required on strictly technical and design courses, and the introduction of courses setting forth fundamental factors included under (among other subjects) accounting. He then comments that if the allotted time is restricted, something must be omitted from standard principle courses in accounting; that the engineer will not make use of his accounting training by doing bookkeeping, but will require some knowledge of accounting statements if he attains a managerial position. This leaves the accounting instructor in a dilemma as to whether knowledge of statements can be imparted without practice work or details of technique.

Demands upon the engineering profession, resulting from our advance into the present machine age, lay heavy burdens upon engineering students. Probably no class of students is called upon to carry a heavier of more varied assortment of subjects than is the engineering student of the present day. The tendency seems to be to increase this burden from year to year. Consequently, a nice problem of balance in time and results is injected into consideration of a program for instruction in costfinding in engineering schools.

"Cost Finding for Engineers" is an attempt to solve this problem of balance between engineering and accounting instruction. In a strict sense, the title is a misnomer, as the work deals more with introductory accounting than with actual costing procedure and principles. The book is the first of a series of two volumes designed to cover the field of accounting and costfinding from an engineer's viewpoint. The second volume, to be known as "Standard Costs and Budgets," in process of publication, will continue the study course into the field of costfinding and managerial control. The present volume, therefore, serves the purpose of the introductory course in accounting principles, considered as a prerequisite to the more advanced subject, cost accounting.

"Cost Finding for Engineers" contains 518 pages and consists of twenty-six chapters, divided into five parts, with an introductory chapter. There are 417 review questions, an average of seventeen questions to a chapter. There are also 156 problems illustrative of the accounting principles covered by the text. The next material occupies 384 pages, and the problems, 126 pages. There is also an index of six pages which seems sufficiently complete for reference purposes.

The introductory chapter acquaints the engineering student with his need for a knowledge of costfinding and gives a general idea of the scope of the course. It is followed by Part I, which consists of ten chapters comprising 175 pages, and deals with the elementary principles of accounting. This portion of the text covers such subjects as classification of accounts; principles of debit and credit; purposes and uses of the various types of journals, with the exception of the voucher register, which is treated later in the book; the general ledger and trial balance, and preparation of the work sheet and closing books.

Part 2 contains three chapters and deals with the distinction between capital and operating expenditures, and the valuation of current and fixed assets. Part 3 consists of 123 pages, divided into nine chapters and discusses column-ruled books, controlling accounts, and the voucher system. The topics are followed by a chapter on cost elements which seems rather brief for a subject of its importance. Three chapters are devoted to controlling accounts as applied to the control of inventories, expenses, and plant equipment. This portion of the work closes with two excellent chapters; one dealing with payroll accounting, and one with code classifications for the identification of accounts.

Part 4, two chapters, thirty-nine pages, under the caption of "Revenue Accounts," discusses the procedure of closing the books, and the preparation of financial statements. Part 5 consists of a single chapter which summarizes the purposes of the second volume, above mentioned, of the series and serves as a connecting link between the two books. There are eighty-four forms of ledger accounts, book rulings, statement examples, and other illustrative material, as well as thirteen charts and numerous diagrammatic presentations. These should be of great assistance in the presentation of the subject to engineering students. The review questions that accompany each chapter serve a useful purpose in that they draw the student back into the text and serve as a cause of re-study and restatement of the ground covered. The problem material is excellently selected and affords the instructor wide choice of assignments, according

to time limits, and the extent to which the class is to be drilled in accounting fundamentals. The problems give ample practice in entries, postings, and bookkeeping procedure, while several of them form an extensive practice set. A possible criticism of the problem material is that it places too much emphasis on entries and procedure and not enough on analytical thinking as to cause and effect. However, it should be remembered that the work deals with a special type of students rather than those of the school of commerce group.

What seems to be one drawback in the text is the omission of capital accounting to any great extent. The student is given little information about proprietorship, partnership or corporation accounting. If any engineering student is to attain his destiny as an executive or manager, it would seem that he should have more familiarity with capital accounting than is offered him. However, this is an illustration of the dilemma that confronts an instructor in a special field. How far should such an instructor go in excluding or including subjects, all of which have some bearing on the student's future activities? It is a hard question to answer and, in the main, the authors have answered it well.

"Cost Finding for Engineers" offers a good groundwork of elementary accounting for special students. Probably not adaptable to the broad accounting foundation required in schools of commerce, it forms a good background for the student in engineering who must acquaint himself with some accountancy before attempting the study of cost accounting.

We shall look forward with interest to the second volume of the series, in which the subjects of standard costs and budgets are to be elaborated.

W. B. Lawrence

Rational Bookkeeping and Accounting. Two volumes. Albert G. Belding and Russell T. Greene. (Boston: The Gregg Publishing Company. 1929. Pp. iv, 503.)

The purpose of this book as given by the authors is to give both "training for immediate employment and education for future promotion with due regard to their relative importance." The purpose is fulfilled, but in accordance with the most progressive thought, the emphasis is a little more upon the future, than the immediate.

The approach involves a combination of both equation and ledger. The authors contend that "scientific educational-practice demands that the beginning student be neither compelled nor allowed to work blindly toward an unknown goal, as inevitably is the case when an attempt is made to follow the bookkeeping cycle in chronological sequence . . . ." The authors have set up a goal for the students, in the form of the bookkeeping equation, and proceed to teach the practice of making entries directly in the ledger accounts.

The Balance Sheet or Equation approach is more than simply a method of attack; it is a means of making bookkeeping a study of business and the effect of transactions, as well as just a study of recording trades and payments. This the authors recognize in their presentation. The authors claim to proceed in their teaching process from what the pupil knows to what he does not know, but any equation approach involves so much abstract reasoning as to make the procedure claimed very questionable.

Long practice sets are frowned upon by the authors, and three-fourths of the two-year book is finished before any sustained set is involved. But there is unfortunately, a lack of practice in carrying on records for the same set through one closing period into another, and again closing.

The text very early shows a good differentiation between assets and expenses, a topic which troubles most beginners. The teaching of the various accounts is well graded, and supplemented by a reasonable amount of practice work. Accruals are introduced rather early in the book, although it is doubtful if the student whose mental age is sixteen can profit from teaching in this subject, even though the text handles the subject well. Reserves are wisely held until much later in the book, a place where they are better comprehended.

Classification of accounts is taught early in the book, and is followed up consistently throughout. A great wealth of short exercises is provided for all subjects introduced. Like many other texts, this one brings into its work an occasional unusual or odd transaction, with clear instruction how to handle it, but no repetitive drill to fix the idea.

A chapter on partnerships gives a short, but good description of such organizations, and the partners' rights and duties. The corporation chapter gives a rather full exposition of the organization, practice, and theory.

Departmentalization is taught concurrently with manufacturing accounts, but not with any mercantile accounting. Practice work in these two subjects is rather scant. The voucher system has a special chapter and has sufficient drill. Notes receivable and notes payable are taught in the orthodox way, as subsidiary records, not as journals. The working sheet is taught without the trial balance after adjusting, an omission that a practical accountant would find a handicap.

A modern touch is offered in David Gray's radio business, for which is carried on a set involving considerable reference to the practical routine preceding bookkeeping records.

A voucher system is taught, as is also a set using consignment accounts, and a single entry set. These are all satisfactory sets, following good current accounting practice, and giving sufficient drill.

Outfits of forms and business papers are available with the text, but may be purchased and used at the discretion of the teacher. H. E. Cowan

BOOKS RECEIVED

Accounting Principles. James O. McKinsey. (Cincinnati: South-Western Publishing Company. 1929. Pp. 640. $3.60.)

Designed for students who intend to specialize in accounting and also for those who will study accounting for only one year as part of a general training in business management.

Aspects of European Economics and Reconstruction. William H. Scheifley. (Los Angeles: Wetzel Publishing Company, Inc. 1929. Pp. ii, 310. $4.00.)

The purpose of this book is to make more widely available trustworthy information about some outstanding aspects of recent economic movements and reconstruction in Europe. The articles here collected have appeared since 1925 in the Chicago Journal of Commerce and the Boston Transcript.

Banking Concentration in the United States. Joseph Stagg Lawrence. (New York: Bankers Publishing Company. 1930. Pp. xv, 318. $5.00.)

This book contains an analysis of present banking trends and criticizes the movement from the standpoint of public policy; safety of operation; and from the standpoint of profits to the individual banks. For purposes of comparison the banks are divided into four different groups and a mass of data has been compiled on these four groups from which is derived a detailed comparison of their operating ratios.

Business Law. Dwight A. Pomeroy. (Cincinnati: South-Western Publishing Company. 1931. Pp. xiii, 722.)

This text is designed for use in collegiate instruction. Contains the more common rules and principles governing business conduct. Legal forms have generally been omitted.

Corporation Accounting. William T. Sunley and Paul W. Pinkerton. (New York: The Ronald Press Company. 1931. Pp. xv, 570. $5.00.)

This is a working manual of modern policy and procedure for corporation treasurers and secretaries, accountants, lawyers, and bankers.

Constructive Accounting. J. F. Sherwood. (Cincinnati: South-Western Publishing Company. 1929. Pp. 252.)

Deals with the planning of the accounting system and the designing of the records and business forms for it. Contains a project requiring an application of the principles developed throughout the text.

Economic and Social Problems of the Machine Age. Arthur Bruce Anthony. (Los Angeles: University of Southern California Press. 1930. Pp. ix, 82. $1.00.)

Exhibits the good and the bad in the Machine Age and unravels for the readers some of the complex interrelationships.

Economic Problems of Modern Life. S. Howard Patterson and Karl W. H. Scholz. Second Edition, revised and enlarged. (New York: McGraw-Hill Book Company. 1931. Pp. xviii, 695. $3.75.)

Designed to serve as the basis of a course in economic problems or as supplementary problem material to the traditional first course in principles.

Fundamentals of Accounting. J. F. Sherwood. (Cincinnati: South-Western Publishing Company. 1930. Pp. 318.)

The subject is approached through a study of the accounting equation. This volume constitutes the first unit of a series of units developing phases of the theory and practice of accountancy. The book contains a project requiring an application of principles developed throughout the text.

Income Tax Accounting. J. F. Sherwood. (Cincinnati: South-Western Publishing Company. 1930. Pp. 235.)

Designed to meet the demand from the schools and colleges of commerce for a clear interpretation of the income tax law and practice material requiring an application of its provisions to the returns of individuals and corporations. The present edition is based upon the Revenue Act of 1928 and the latest rulings and regulations of the Treasury Department. Seven chapters are devoted to the tax on individuals and three chapters to the tax on corporations. Questions and problems are provided.

Money. Samuel Crowther. (Boston: The Stratford Company. 1929. Pp. ii, 204. $2.00.)

From an analysis of the money market and methods of building wealth, rules have been derived and are presented in condensed form in this book. It is designed to serve as a guide on investment, banking, and installment buying and the general application of money.

Mortality in Retail Trade. Edmund D. McGarry. (Buffalo: The University of Buffalo Bureau of Business and Social Research. 1930 Pp. xix, 198. $3.00.)

A study of the mortality of retail stores in Buffalo begun in the summer of 1928.

National Association of Cost Accountants Yearsbook 1930. (New York: National Association of Cost Accountants. 1930. Pp. iv, 278. $3.00.)

Proceedings of the eleventh international cost conference. Contains sections on market study and sales analysis, selling and distribution costs,

organization of the comptroller's department, standard costs, inter-department and inter-branch transfers of products at cost or market price, and incentive plans in business.

Stock Brokerage and Investment House Accounting. F. W. Thornton. (New York: Harper & Brothers. 1930. Pp. viii, 188. $3.00.)

Describes the best accounting practices now in use among houses of the highest standing on Wall Street. Contains a description of the books used, the usual transactions, and also presents a set of specimen transactions with their entries in the books.

Stock Speculation and Business. George L. Hoxie. (Boston: The Stratford Company. 1930. Pp. ii, 67. $1.00.)

Contains an outline of the mechanics of stock speculation and shows the intimate connection between stock-trading and general business.

The Banking Structure of the Seventh Federal Reserve District. Bureau of Business Research. (Urbana: University of Illinois. 1931. Pp. 63. 50 cents.)

Contains chapters on the economic resources of the seventh federal reserve district, banking structure and federal reserve membership in the seventh district, and reserve position of banks in the district since 1910.

The Federal Fund Market. Bernice C. Turner. (New York: Prentice-Hall, Inc. 1931. Pp. vii, 107. $1.25.)

The chapters of this book describe federal funds and their market, sources of federal funds, uses of federal funds, factors which may affect the prices of federal funds, and the regulation of the federal fund market.

The Financial Plan of Department Stores. Bureau of Business Research. (Urbana: University of Illinois. 1930. Pp. 37. 50 cents.)

This is a study in financial structure. It contains chapters on statistical procedure, current ratio of department stores, property investment of department stores, and sources of capital of department stores.

The Menace of Overproduction, Its Cause, Extent and Cure. Scoville Hamlin. (New York: John Wiley & Sons, Inc. 1930. Pp. x, 202. $2.75.)

Eighteen different phases of industry are discussed, each by a specialist who knows from personal contact the problems of his own field. All are agreed as to the fundamental reason for the present business depression.

The Trusts and Economic Control. Roy Emerson Curtis. (New York: McGraw-Hill Book Company, Inc. 1931. Pp viii, 525.)

This is a book of material dealing with the growth of great enterprises and the concentration of control in economic affairs. Established fact and authoritative comment have been taken from as many of the available sources as practicable. No intentional emphasis has been given to any point of view on truly controversial matters.

The Work of the Stock Exchange. Second revised edition. J. Edward Meeker. (New York: The Ronald Press Company. 1930.)

This book contains a historical sketch and a thorough treatment of the activities of the New York Stock Exchange.

Wall Street. Charles F. Hodges. (New York: Wall Street Business School. 1930. Pp. viii, 512. $6.00.)

Describes the routine methods and practices employed by brokerage houses in the handling of securities and the mechanics of the transactions involved in the purchase and sale of securities.

Walton Federal Income Tax Course. (Chicago: Walton Publishing Company. 1930. $3.75.)

All the laws explained and interpreted in one place. References, illustrations, and practical applications, together with filled-in specimen forms, discussions of Federal Estate Tax and the complete text of the Revenue Act are provided. The course is kept up to date.

UNIVERSITY NOTES

Baylor University

A new accounting law which requires the registration of all public accountants has been introduced in the legislature.

A chapter of Delta Sigma Pi has recently been installed at the University.

University of Chicago

Professor J. Hugh Jackson of the Stanford University Graduate School of Business Administration, has been appointed professor of accounting at Chicago. Mr. Jackson is to take up his duties at Chicago in June of this year.

University of Florida

Mr. H. W. Gray, professor of accounting, has been admitted to the partnership of Ford, Fisher, Boyd, and Colley as resident partner in charge of their Gainesville office. The firm also has offices in Jacksonville and West Palm Beach. Mr. Gray will continue his university work.

Mr. Fred C. Ward, instructor in accounting, will take the C.P.A. examination in May.

University of Georgia

Dean R. P. Brooks is traveling in the Far East for the year as Kahn Fellow. Mr. Lloyd B. Raisty has returned to the department after a year of graduate study at the University of Texas.

Kansas State Agricultural College

New courses in Governmental Accounting and in Accounting Systems have been added to the curriculum. They are being conducted by Mr. Stewart and by Mr. A. R. Jones.

University of Michigan

Mr. Perry Mason has left the accounting staff to assume a position at Antioch College. Mr. L. L. Laing, M.B.A., has been added to the staff with the rank of instructor.

University of Minnesota

The Minnesota Association of Public Accountants and the Minnesota Society of Certified Public Accountants recently tendered Dean Stevenson a special dinner in honor of his election to the presidency of the Association of University Instructors of Accounting.

Mr. Ostlund during the holidays made a trip to Salt Lake City in the interests of the survey of distribution costs of the National Wholesale Drug Association.

Two accounting bills are before the legislature providing restrictive legislation of the Michigan type. Meetings of the state societies have approved the principle of restrictive legislation and the bills will have strong support.

An unemployment measure introduced in the legislature calls for the moving forward of the university building program which, if accepted, would provide for a new building for the School of Business Administration in the immediate future.

University of Montana

Mr. Ernest E. Atkinson, instructor in business psychology, is on leave of absence for the year to carry on graduate work at Stanford University. Mr. E. R. Sanford has just published a complete first year text in accounting through the Crowell Publishing Company under the title "Applied Accounting Principles."

Dean Line has been assisting the Retail Merchants' Association in conducting a series of business conferences. A folder describing the advantages of the Rockies for summer-session work and for recreation has just been published by the University. The School of Business Administration will offer a number of summer courses this year.

Alpha Kappa Psi has been conducting a number of meetings with outside speakers this year and has also been sponsoring a paper stock exchange for the study of current stock quotations.

A new C.P.A. bill has been introduced in the legislature which is arousing considerable difference of opinion between those accountants who have received their C.P.A. by waiver and those who have passed the examination for the degree.

New York University

Associate Professor Lang and Assistant Professor Harris have enrolled at Columbia and are working towards their Ph.D. degree.

Mr. Rosenkampff has accepted member-

ship on the Committee on Classification of Accounting Services of the New York State Society.

University of North Dakota

Mr. Frank Higginbotham, a graduate of the University of Illinois, has been added to the staff with the rank of instructor in accounting. Mr. Elmer C. Koch has been advanced to the rank of assistant professor.

Ohio State University

Professor Jacob B. Taylor has been appointed Chairman of the Department of Accounting, succeeding Mr. Howard C. Greer, who resigned a little over a year ago.

J. B. Heckert has been re-elected chairman of the Ohio Controllers of Steel Companies.

University of Pennsylvania

Jeremiah Lockwood, assistant professor of accounting, and Arthur D. Maxwell, instructor in accounting, were successful candidates for the C.P.A. at the November Examinations.

William D. Gordon, professor of accounting in Wharton School, has been appointed by Governor Pinchot as First Deputy Secretary of Banking for the state. In this capacity he will have supervision of the building and loan associations of the state. Mr. Gordon held this position during the years 1924-26 when he resigned to become secretary and Treasurer of the Cincinnati, Hamilton and Dayton Railroad. In 1929, he was elected treasurer of the Cincinnati and Lake Erie Railroad, which position he has just resigned to assume the position in the banking department.